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EFFECT of WOOL CONSUMPTION
upon the
BEHAVIOR of DOMESTIC WOOL PRICES

- - -

A

THESIS

Offered in Partial Fulfillment
of the
Requirements for the Degree of
Master of Business Administration

by

Russell L. Burrus

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CHAPTER I

INTRODUCTION

Price changes tend to throw trade out of balance and therefore anything which causes drastic changes in wool prices is of vital interest to wool growers, wool dealers, wool manufacturers, and to the bankers who assist in financing the enterprises of any of these economic groups.

Success of production plans and selling policies of wool producers is greatly influenced by the trend of wool prices. Changes in production plans can be made only very slowly. Errors likewise cannot be quickly rectified and may prove very costly. At each shearing season growers are faced with the problem of whether to sell at once, at the price offered, or to hold.

Merchandising programs of wool dealers may succeed or fail, according to what happens to wool prices from the time when wool is bought until it is sold to manufacturers. Wool merchants do the bulk of their buying normally in a period of a few months in Spring and Summer. Selling may go on throughout the year. Hence, considerable time may elapse before dealers completely turn over what was purchased in a relatively short time. In the meantime, much can happen to wool prices that may result in profits to the dealers, or on the other hand, may result in losses that will

put dealers out of business.

Manufacturers of wool frequently take orders for goods three to six months before delivery date. In many cases, orders are taken before the wool to cover them has been bought. If prices of wool should rise before the manufacturer has covered, he stands to lose money on the transaction. If prices of wool should decline, he may realize a handsome profit. A knowledge of the factors determining trends of wool prices should enable manufacturers to balance buying and selling operations in a manner to assure profits and reduce risks.

The banker has to think of the wool price trend when he makes a loan to a wool grower, dealer, or manufacturer. As long as the price level remains unchanged, or if the price level rises, wool loans are safe, but if the prices of wool start to go down, the safety of the loan is placed in danger. Avoidance of bad loans on wool is the banker's interest in a knowledge of what causes wool prices to fluctuate.

PURPOSE AND SCOPE OF THE STUDY

Personal contact in the wool market year after year serves to impress upon an observer a certain cycle of events that typify a sort of a normal sequence. Just as regularly as the seasons roll around, traders in the wool market begin to look for certain developments. Sometimes, of course, they are disappointed--often enough, in fact, to lead some members of the trade to doubt if there is any

such thing as a "normal" in the wool industry. Yet, in a general way, there is a sequence of events that the men of long experience in the market have come to identify with certain seasons of the year. Briefly, they may be listed as follows:-

1- Trade at low ebb in early Spring,

2- Gradual pickup in late Spring and early Summer,

3- Brisk trade by August, lasting into October,

4- Gradual decline in trade from November until after turn of the year,

5- Brisk recovery in trade during January and February, and

6- Gradual tapering off of trade late in first quarter, lasting until the middle of the second quarter.

Thus, the trade in wool appears to have a rather marked seasonality. An examination of the monthly data on consumption of four grades of greasy combing domestic wools in Table II of the Appendix of this report, gives one an impression of a trend that coincides very closely to the cycle of trade in a typical year in the wool market. Seasonality of consumption and trading in the wool market, then, seem to be definitely associated. Low consumption tends to occur some time in the second quarter of the year; high consumption tends to occur either late in the third quarter or early in the fourth.

Graphical presentation of the consumption data on four grades of wool in Chart I shows an upward tendency in volume of wool

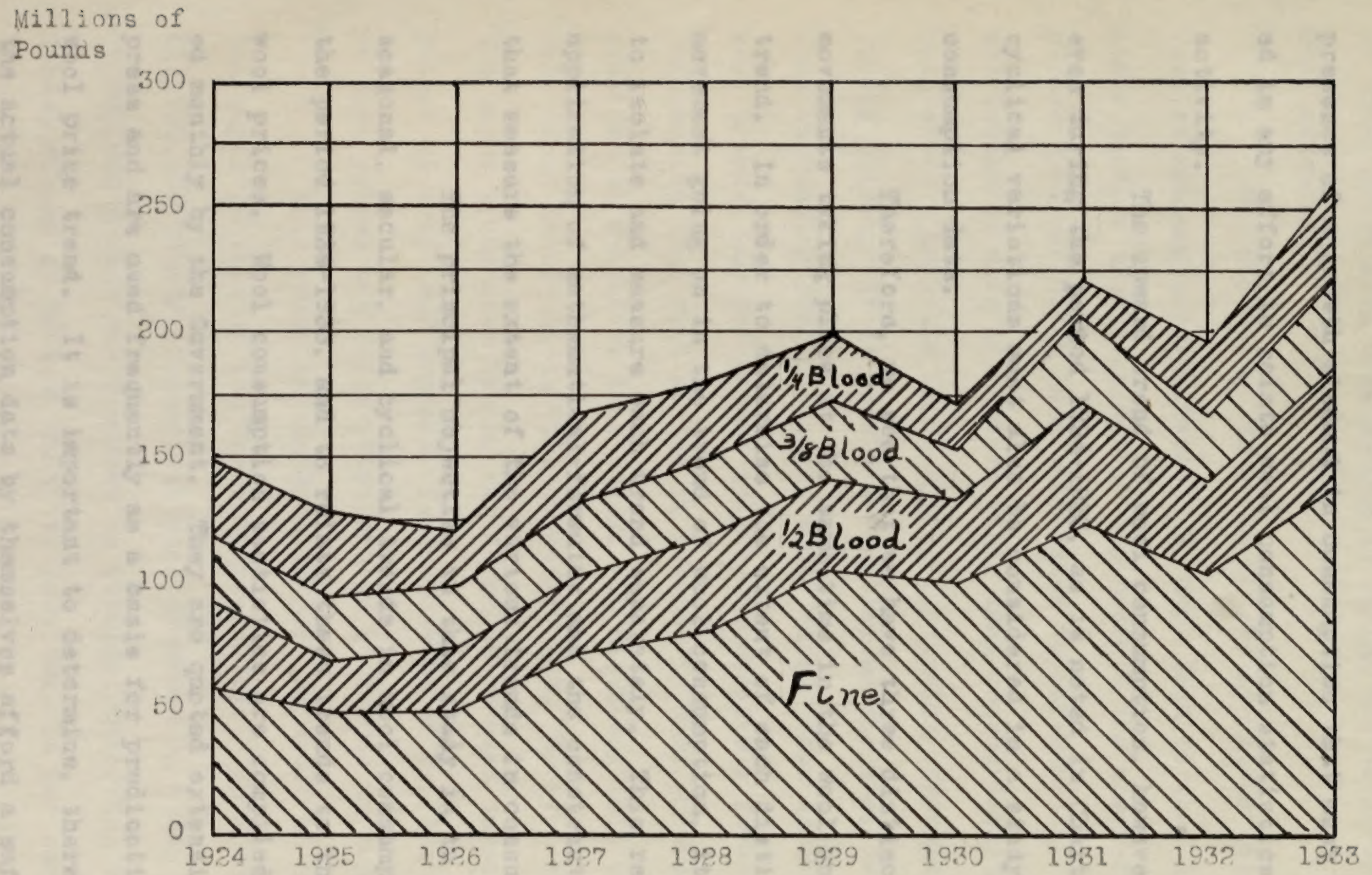

Chart I.- Trends in consumption of greasy combing domestic wools.

consumption over the period 1924 to 1933, inclusive, some grades showing this tendency more than others. Hence, we see at once the presence of a growth element in consumption that must be considered in any effort to relate wool consumption statistics with market activity.

The upward trend of wool consumption, however, was not even during the period 1924-1933, as is noted in Chart I. These cyclical variations must also be considered in a study of wool consumption data.

Therefore, we see that we have three distinct kinds of movements taking place at the same time in the wool consumption trend. In order to determine the extent of each distinct kind of movement going on in the trend of wool consumption, it is necessary to isolate and measure each trend separately. This requires the application of mathematical formulas and the construction of indexes that measure the extent of the various trends in consumption.

The principal objective in this study is to measure the seasonal, secular, and cyclical trends in wool consumption over the period 1924-1933, and to relate these trends to the behavior of wool prices. Wool consumption statistics are compiled and published monthly by the Government. They are quoted extensively by the press and are used frequently as a basis for predicating the future wool price trend. It is important to determine, therefore, whether the actual consumption data by themselves afford a sufficiently sound basis for predicting major changes in the wool price trend.

The assumption often observed in connection with these predictions is that, after all, consumption is rising and therefore prices must advance.

Our objective, then, is to see if prices actually do rise as consumption increases. We must look further to see if other factors than consumption can produce the same effect upon prices that has often been attributed to consumption. We must try and determine also if factors other than consumption may possibly counteract a possible tendency for increasing consumption to cause rising prices. It is possible that demand for wool is elastic and that increasing consumption of wool, rather than causing higher wool prices, may be secured only by successively lower price levels. Information that will assist in solving to some extent the foregoing problems is sought in this study. In attaining this objective, many minor fluctuations will be overlooked. We wish to determine the major tendencies in the relationship between consumption and prices of wool, and explain, insofar as possible, the major trends of wool prices not fully attributable to trends in consumption.

This study is confined to combing wools as they comprise the major portion of the domestic production. In a total of 319,700,000 pounds of domestic wool consumed in 1931, all but 50,000,000 pounds was reported as combing, according to the United States Bureau of Census, that is, less than 16 per cent.

Justification for including only four grades of domestic

wool in this study is also found in the United States Bureau of Census figures. Of the total consumption of combing wool, amounting to 269,600,000 pounds in 1931, only 8,300,000 pounds were of grades below 1/4 Blood, which is just over 3 per cent.

SOURCE OF DATA

Wool prices used in this study are monthly averages of weekly price ranges compiled and released by the Bureau of Agricultural Economics of the United States Department of Agriculture. All prices used in this study are based upon the estimated scoured basis of greasy combing domestic wools. Nine price series of the most prominent lines handled in the Boston market were selected for this study. Four of the series were of Fleece wools, that is, of wools grown east of the Mississippi River. The other five series were on Territory wools grown in the western mountain range states. Prices for each of the nine grades by months for years 1924 to 1933, inclusive, are carried in Table I of the Appendix.

Four grades of wool are represented by these nine price series. They are as follows:- Fine (64s,70s,80s), 1/2 Blood (58s,60s), 3/8 Blood (56s), and 1/4 Blood (48s,50s).

The grade of wool is determined by the diameter of fiber. Official standards for grades have been promulgated by the United States Department of Agriculture, and the Department prepares sets containing small samples illustrating the wool of maximum coarseness eligible for each grade. While the official standards for

grades of wool have not been defined by the Department of Agriculture in terms of physical measurements, independent investigators have done some work along this line. E. R. Schwarz, Assistant Professor of Textile Technology at the Massachusetts Institute of Technology, presents in his book, "Textiles and the Microscope", page 279, a key for quality determination. The word "quality" here is used synonymously with the term "grade". In order to clarify the meaning of the terms for grade, such as Fine (64s,70s, 80s), 1/2 Blood (58s,60s), etc., the results of measurements reported by Professor Schwarz are presented in the following table:-

Quality Number	Average Diameter Microns	Equivalent in Inches
64s,70s,80s	19.0-23.0	.000748-.000906
58s,60s	22.5-26.0	.000808-.001025
56s	25.5-28.5	.001006-.001124
48s,50s	28.0-34.0	.001104-.001341

It is noted that the ranges of averages in this table show some overlapping. This overlapping of averages reflects the wide variation in diameters of fibers in all grades of wool. The microscope reveals that many fibers in any particular sample of wool may have diameters running three to five times the diameter of the smallest fibers in that sample. Consequently, in commercial practice where the microscope is used to determine fiber quality, certain tolerances are used to supplement the information given by

the average diameter. These tolerances consist of a permissable number of fibers above a certain diameter in a sample of wool eligible for a given grade. As an illustration, the average diameter of 56s grade may fluctuate in the range 25.5 to 28.5 microns, but any sample of wool to qualify for this grade must not have more than 40 fibers per hundred over 30 microns in diameter or more than 6 fibers per hundred over 40 microns in diameter.

The column headed "Equivalent in Inches" in the Table on page 7 was computed from the "Conversion Table-Microns to Inches" on page 77 in Professor Schwarz's book, "Textiles and the Microscope".

All grades, except Fine, are each represented by two price series. Fine Territory wools are represented by two price series, Strictly Combing and French Combing, because, by weight, the latter has been of increasing importance during the past few years. The Strictly Combing Fine group of Territory wools has been relegated more or less to the specialty class, and, therefore, that price series would not be as representative of the Fine Territory wools as the French Combing type.

The significance of the meaning of the terms "Strictly Combing" and "French Combing" is seen by consideration of the tentative basis for classifying length of wool staple issued by the United States Department of Agriculture. Inch specifications provided by the tentative length standards are shown in the

following table: (1)

Grade	Clothing	French or Baby Combing	Strictly Combing
Fine	Under 1¼ inches	From 1¼ to 2 inches	Over 2 inches
1/2 Blood	Under 1¼ inches	From 1¼ to 2¼ inches	Over 2¼ inches
3/8 Blood	Under 1½ inches	From 1½ to 2½ inches	Over 2½ inches
1/4 Blood	Under 1½ inches	From 1½ to 2¾ inches	Over 2¾ inches
Low 1/4 Blood	Under 2 inches	From 2 to 3 inches	Over 3 inches

In actual market practive, French or Baby Combing is not commonly used in connection with grades coarser than 1/2 Blood (58s,60s). The Bureau of Census does not make any distinction between Strictly Combing and French Combing, but includes both classes as "Combed" in their reports of wool consumption. Consumption of Clothing wool is reported as "Carded". Previous to 1933, the Bureau of Census used the terms "Combing" and "Clothing" in their wool consumption reports, but terminology applied to length of staple was changed along with other revisions of the report adopted in that year.

Wool consumption figures were compiled from the Monthly Wool Consumption reports issued by the United States Bureau of Census. Only the greasy combing domestic wool consumption data were compiled, for it was desired to keep consumption and price data on as nearly a comparable basis as possible. While it is evident that wool consumption reports do not completely cover the

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(1) The Wool-Growing Industry, table page 217, published by the U. S. Tariff Commission, 1921.

industry, the group of manufacturers reporting during the period covered by this study has remained fairly consistent, as indicated by details relative to the basis of the figures given in each report. Approximately 80 per cent of the industry has been represented in the monthly wool consumption reports since 1922. This gives a good cross-section of the industry. Monthly data on consumption of each of four grades of wool for years 1924-1933, inclusive, are given in Table II of the Appendix.

PRICE VARIABILITY

As a background for a detailed comparison of trends of wool consumption and prices, it is of interest to consider briefly some of the characteristics of the price changes that have taken place in the past ten years. These changes will be considered from the standpoint of their frequency, extent and range, as shown by actual and relative measures. In consideration of price variability, attention was given to the tendency of the different price series to move with respect to each other.

Frequency of Price Changes -- During the period 1924-1933, monthly averages in the various price series were unchanged in only about 10 per cent of the months--percentage was based upon 119, the number of months in which changes were possible. Monthly averages of Fine and 3/8 Blood Fleeces were unchanged in 9 per cent of the months. Quarter Blood Fleece averages were unchanged 10 per cent of the time, while 1/2 Blood

Fleece averages were unchanged in 16 per cent of the months. Percentage of months in which averages were unchanged in the five Territory wool price series were as follows:- 4 per cent in 1/4 Blood, 6 per cent in 3/8 Blood, 13 per cent in 1/2 Blood and Fine Strictly Combing, and 14 per cent in Fine French Combing. The significance of these figures lies in the fact that we could, in the past ten years, have looked for prices to remain unchanged, on the average of only one month during the course of a year. In actual experience, prices of some grades were unchanged for several consecutive months and then changed every month for several years.

EXTENT of MONTHLY CHANGES

Wool price averages, for the nine series covered in this report, have changed approximately 2¾ cents per month over the ten-year period 1924-1933. This average includes all changes regardless of whether they represent declines or advances. The extent of monthly changes varied in different years. On the sharp rise of 1924, changes averaged around 5 cents per month, while in the sharp drop of the following year monthly averages of the nine grades varied from 4-6 cents per month. Changes were relatively slight in some years. The changes averaged around one cent per month in 1927, around 1½-2 cents in 1928, 1930 and 1931, around 2-3 cents in 1929 and 1932, and 3-4 cents in 1933. Variations in average monthly changes in prices for the different years are greater than variations among the grades, and are great

enough from the financial standpoint to require serious consideration of their causes by growers, dealers, manufacturers, or bankers.

Range of High and Low Prices -- Peaks and low points in the wool price movement of the period 1924-1933 also stress the tendency of prices of the various grades to move in harmony. Table I, showing actual prices, or Table III, showing fixed base relatives of prices, makes the existence of that tendency clear for it will be noted that the highs for the nine series came either in January or February of 1925 and the lows of all grades came in July 1932. Not only were turning points closely grouped with respect to time, but the declines as percentages of the highs of all grades fell within a relatively narrow range, 77.8 per cent to 80.6 per cent. Also, high and low fixed base relatives, as well as declines, on all grades were rather closely grouped.

The actual high, low and decline in prices of each grade, together with declines as a percentage of highs are presented in the following table:-

	High (Dollars)	Low (Dollars)	Decline (Dollars)	Decline as Per Cent of High (Per Cent)
Fine Strictly Combing Fleece	1.700	.368	1.332	78.4
1/2 Blood Strictly Combing Fleece	1.564	.321	1.243	79.5
3/8 Blood Strictly Combing Fleece	1.365	.270	1.095	80.2
1/4 Blood Strictly Combing Fleece	1.260	.244	1.016	80.6
Fine Strictly Combing Territory	1.675	.365	1.310	78.2
Fine French Combing Territory	1.538	.339	1.199	78.0
1/2 Blood Strictly Combing Territory	1.562	.339	1.223	78.3
3/8 Blood Strictly Combing Territory	1.361	.302	1.059	77.8
1/4 Blood Strictly Combing Territory	1.262	.276	.986	78.1

Fixed Base Relatives -- Price relatives, based upon the 1926 average, were computed for the monthly and annual averages of each of the nine series of prices. These relatives facilitated comparisons of prices of the various grades. Equal actual changes were not of equal significance because of the difference in price levels of the various grades. The high, low and decline of these relatives for each grade for the period 1924-1933 are as follows:-

	High 1926-100	Low 1926-100	Decline 1926-100
Fine Strictly Combing Fleece	151.2	32.7	118.5
1/2 Blood Strictly Combing Fleece	154.9	31.8	123.1
3/8 Blood Strictly Combing Fleece	159.3	31.5	127.8
1/4 Blood Strictly Combing Fleece	161.1	31.2	129.9
Fine Strictly Combing Territory	144.1	31.4	112.7
Fine French Combing Territory	143.9	31.7	112.2
1/2 Blood Strictly Combing Territory	150.0	32.6	117.4
3/8 Blood Strictly Combing Territory	147.1	32.6	114.5
1/4 Blood Strictly Combing Territory	152.0	33.3	118.7

Relatives by months for each of the grades are found in Table III of the Appendix.

The small variations of the percentage declines from high actual prices of all grades was confirmed by the relatively narrow range of the declines in relatives from the highs. The major trends in prices of the greasy Combing domestic wools, therefore, can be determined from a relatively small number of price series because prices of the various grades showed a strong tendency to move as a group.

A point that becomes apparent after only a little study of the price relatives in Table III is the fact that high prices of all grades were attained early in 1925, while the low prices were in 1932, the period of decline extending over nearly 7½ years. Furthermore, the highs came either in January or February, 1925, while the

lows all came in July, 1932.

The occurrence of the high prices in the first two months of the year and the low prices in July suggested the possibility that prices of wool may show some degree of seasonality. A study of relatives for individual years revealed a tendency for low prices to occur in the middle of the years, and for the high prices of the year to occur in the first and fourth quarters. The evidence from a rapid survey of prices was strong enough to indicate the desirability of measuring their seasonality. The long decline from early 1925 to July 1932 had already indicated a marked secular trend. Then, in order to secure a measure of cyclical fluctuations of prices, it was found necessary to eliminate the seasonal and secular trends.

Now, to carry the investigation of price variability one step farther before taking up the study of seasonal, secular and cyclical trends, it is of interest to compare the trend of wool prices with the general price level. Annual price relatives of Fine French Combing and 3/8 Blood Strictly Combing Territory wools, taken from Table III in the Appendix, compared with annual average indexes for wholesale prices, compiled by the United States Department of Labor, show that changes in wool prices over the period 1924-1933 were greater than the changes in the general price level. This is clearly

shown in the following table:—

	Wholesale Price Index (2)	Fine French Combing Territory	3/8 Blood Strictly Combing Territory
	Av. 1926-100	Av. 1926-100	Av. 1926-100
1924	98.1	122.6	122.3
1925	103.5	122.6	119.6
1926	100.0	100.0	100.0
1927	95.4	96.5	97.9
1928	96.7	102.3	112.0
1929	95.3	88.4	99.8
1930	86.4	67.3	68.5
1931	73.0	54.2	53.9
1932	64.8	40.8	43.7
1933	65.9	60.2	65.7

Summarizing briefly, prices of the nine important grades of domestic wools tend to move as a group with respect to timing, direction, and extent of fluctuations. Wool prices, however, suffered greater changes than the general price level during the period studied. The discussion now proceeds to the methods of computing seasonal, secular and cyclical trends of prices and consumption. The measures of these trends were used as the basis for the study of the relationship between prices and consumption.

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(2) World Economic Review 1933, page 92, published by the U. S. Department of Commerce.

COMPUTING SEASONAL, SECULAR and CYCLICAL TRENDS

Measures of seasonality, long time trends, and cyclical fluctuations were computed by methods described by William G. Sutcliffe in his book entitled, "Statistics for the Business Man". As this book is readily accessible, the methods are not described here.

Seasonal and secular trend measures were based upon data for the year 1924-1932, inclusive. The large number of unusual developments in 1933, entirely unlike conditions prevailing in the previous nine years, suggested the inadvisability of including this year in the period for which trends were computed. Cyclical indexes, however, were carried through 1933 by extension of the trend line and use of the same seasonal indexes and secular trends as for previous years.

Seasonal Indexes (3) -- Computing seasonal indexes was done by the monthly means method. The effects of secular trend were thus largely eliminated by the selection of the period, for the extreme years of the period 1924-1932 represent low years in complete cycles. Seasonal indexes were computed for consumption and prices of four grades of wool. The setup for computing seasonal indexes for consumption of Fine greasy combing domestic wool is shown in the following table:-

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(3) "Statistics for the Business Man", by Sutcliffe, page 183.

SEASONAL INDEX
CONSUMPTION of FINE GREASY COMBING DOMESTIC WOOL
MEAN MONTHLY METHOD
Years 1924-1932

	Mean Monthly Consumption (1000 lbs.)	Seasonal Index
January	6,499	96
February	6,440	95
March	5,892	87
April	5,323	78
May	4,870	72
June	5,408	79
July	6,742	99
August	8,145	120
September	8,621	127
October	8,644	127
November	7,557	111
December	7,390	109
ALL MONTHS	6,794	100

The average tendency of consumption of this particular grade of wool, as shown by the seasonal index for the years 1924-1932, was to drop to the low of 72 per cent of the mean monthly, of all months, in May, and to rise from that point to a peak of 127 per cent in September, the peak level being maintained through October.

Measure of Secular Trend (4) -- The monthly mean method was used in determining the long term trend in consumption of four grades and in prices of two grades. The method is illustrated by the following table:-

SECULAR TREND of CONSUMPTION
of
GREASY COMBING FINE DOMESTIC WOOL
1924-1932

Year	Monthly Mean Y (1000 lbs.)	Deviations From Mean Year X	Deviations Squared X	XY	
1924	4,557	-4	16	-18,228	
1925	4,121	-3	9	-12,363	
1926	4,139	-2	4	- 8,278	
1927	5,935	-1	1	- 5,939	-44,808
1928	6,444	0			
1929	8,717	1	1	8,717	
1930	8,296	2	4	16,592	
1931	10,402	3	9	31,206	
1932	8,544	4	16	34,176	90,691
TOTAL	61,155		60		45,883

Mean Monthly Consumption for Period - $\frac{61{,}155}{9} = 6{,}795$

Yearly Growth - $\frac{45{,}883}{60} = 765$

Monthly Growth - $\frac{765}{12} = 64$

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(4) "Statistics for the Business Man", by Sutcliffe, page 211.

Secular Trend for June 15, 1928 = 6,795.

Secular Trend for July 1, 1928 = $\frac{64}{2}$ + 6,795 = 32 + 6,795 = 6,827.

Cyclical Index (5) — Monthly cyclical indexes were computed for consumption of four grades and prices of two grades. The cyclical index expresses changes in prices or consumption after the effects of seasonal and secular trends have been removed. The final steps in the computation of the cyclical index are illustrated in the following exhibit:-

	Consumption				Cyclical
Year & Month	Actual	Secular	Actual+Secular	Seasonal	Index
1924					
January	4,317	3,435	126	96	+ 30
February	3,885	3,499	111	95	+ 16
March	3,769	3,563	106	87	+ 19

It is seen in this exhibit what the cyclical index reveals. For example, an actual decline in March, 1924, was a cyclical rise because of the low seasonal index for that month.

Complete monthly indexes for consumption of all grades are found in Table IV, and for prices of two grades are found in Table V.

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(5) "Statistics for the Business Man", by Sutcliffe, page 225.

CHAPTER II

SEASONAL TRENDS of CONSUMPTION and PRICES of WOOL

It was shown in the previous Chapter that fluctuations in consumption and prices of wool have certain characteristics associated with the time of year. We have seen from a brief survey of monthly data that extreme fluctuations of consumption and prices are inclined to center in a relatively few months. High months in consumption are usually found late in the third or early in the fourth quarter of the year. High prices are inclined to occur in the first quarter of the year. Low prices and low consumption occur most frequently in the second quarter.

Only very general impressions, however, have been gathered from the survey we have just made.

In order to get a more accurate measure of the timing and extent of seasonal movements, seasonal indexes were computed as outlined in the previous Chapter. Seasonal indexes of consumption of four grades of wool are shown in the following table:-

SEASONAL INDEXES of WOOL CONSUMPTION

Years 1924-1932

	Fine	1/2 Blood	3/8 Blood	1/4 Blood
January	96	109	98	95
February	95	84	82	87
March	87	77	84	87
April	78	74	81	68
May	72	77	77	76
June	79	80	82	86
July	99	106	97	104
August	120	124	122	119
September	127	123	124	135
October	127	130	127	135
November	111	115	115	112
December	109	101	111	96

The following table shows seasonal price indexes computed for the same period:-

SEASONAL INDEXES of WOOL PRICES

Years 1924-1932

	French Combing Territory Fine	Strictly Combing Fleece 1/2 Blood	Strictly Combing Territory 3/8 Blood	Strictly Combing Fleece 1/4 Blood
January	108	110	109	111
February	107	109	107	109
March	104	105	104	105
April	101	101	100	99
May	98	97	96	94
June	96	95	94	92
July	96	95	95	94
August	97	96	96	94
September	98	97	98	98
October	98	98	99	100
November	99	99	100	101
December	98	99	100	103

GRAPHICAL PRESENTATION of SEASONAL TRENDS

Charts II and III show graphically the seasonal indexes of prices and consumption of two grades. The solid line represents the deviations of consumption from normal while the broken line represents the fluctuations of prices from normal. The straight, heavy, solid line, opposite the 0 at the left, repre-

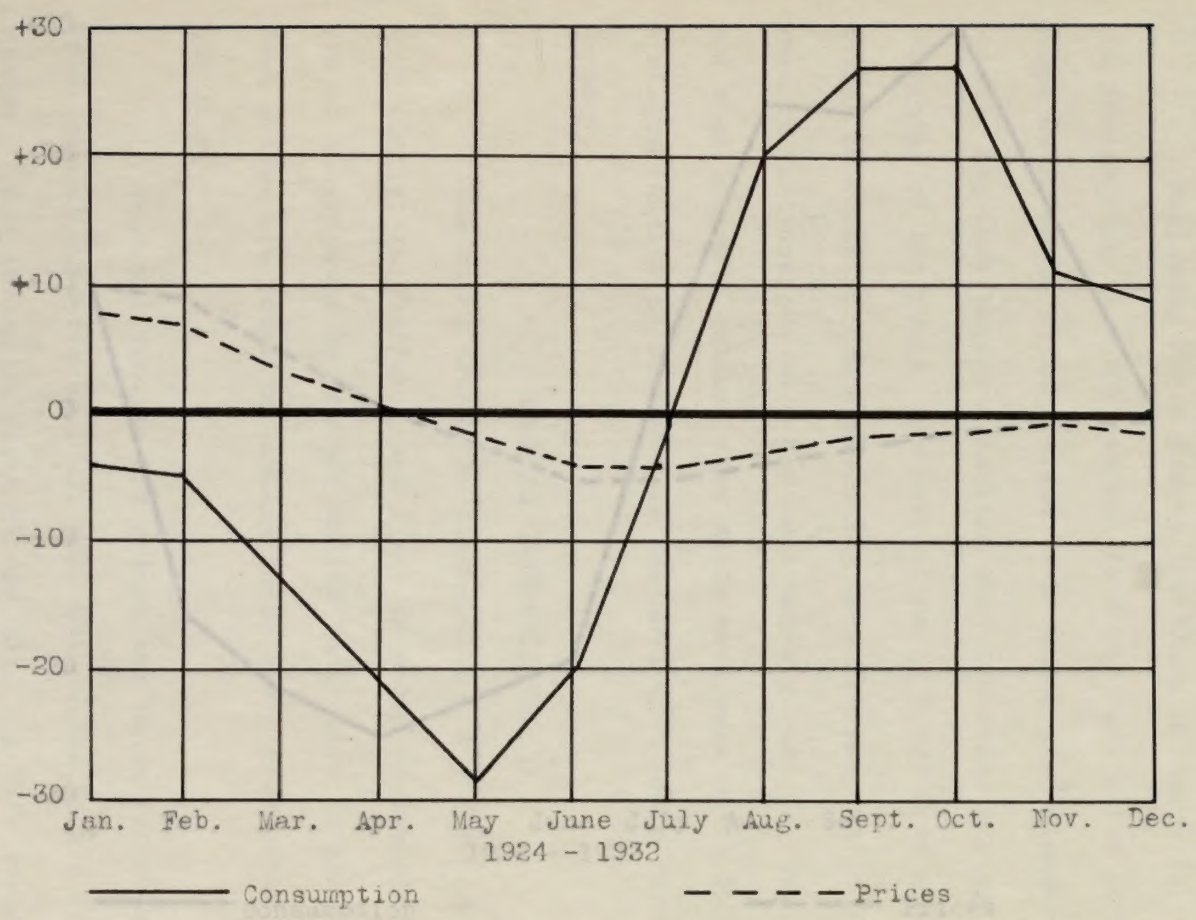

Chart II.- Seasonal trends of U. S. consumption of fine greasy combing wool and prices of French Combing fine Territory wool.

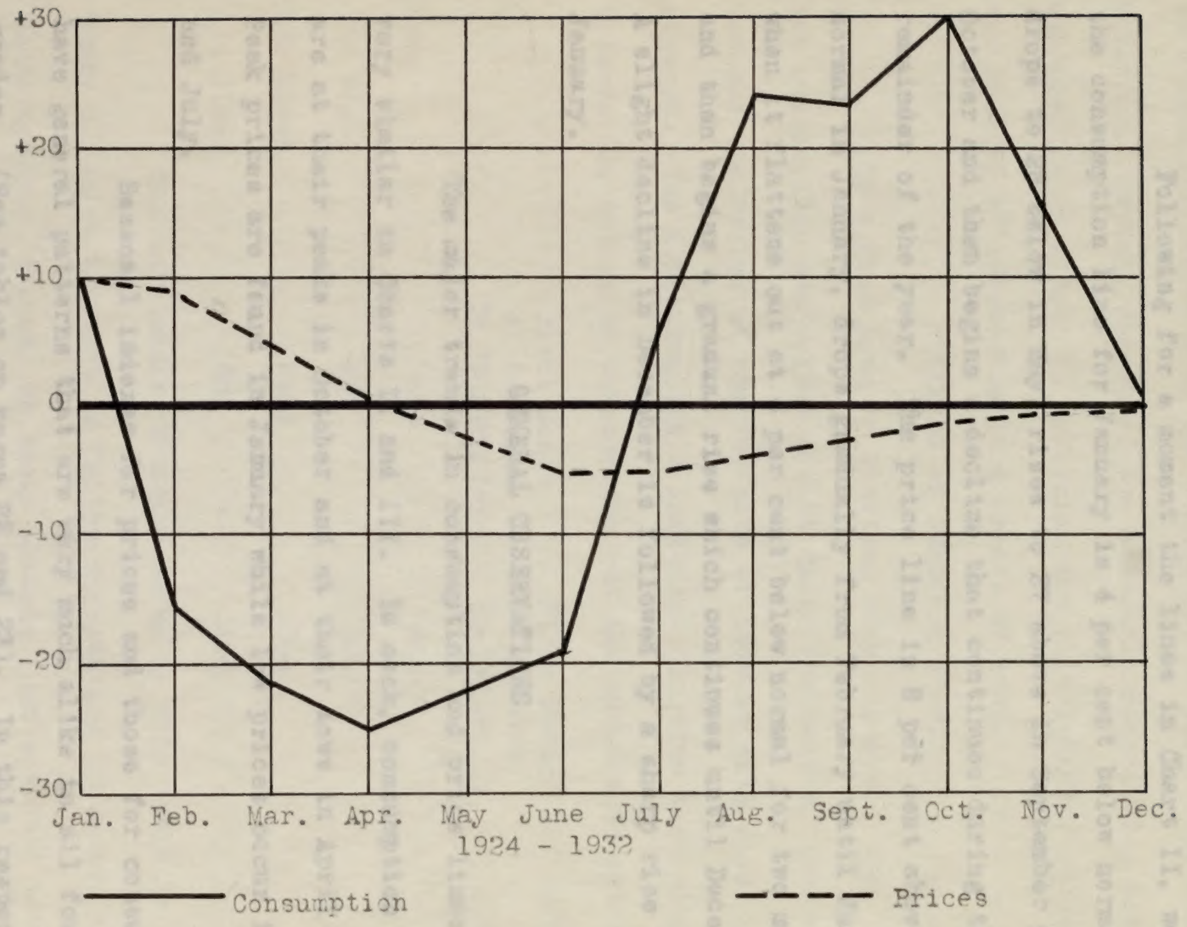

Chart III.- Seasonal trends of U. S. consumption of 1/2 blood greasy combing wool and prices of Strictly Combing 1/2 blood Ohio wool.

sents the normal for prices and consumption. The figures at the left, preceded by + signs above the normal line and - signs below, represent percentages of normal.

Following for a moment the lines in Chart II, we find the consumption line for January is 4 per cent below normal, drops to 28 below in May, rises to 27 above in September and October and then begins a decline that continues during the remainder of the year. The price line is 8 per cent above the normal in January, drops gradually from February until June when it flattens out at 4 per cent below normal for two months and then begins a gradual rise which continues until December. A slight decline in December is followed by a sharp rise in January.

GENERAL OBSERVATIONS

The major trends in consumption and price lines are very similar in Charts II and III. In each, consumption lines are at their peaks in October and at their lows in April or May. Peak prices are found in January while low prices occur in June and July.

Seasonal indexes for prices and those for consumption have general patterns that are very much alike in all four grades. (See tables on pages 22 and 23). In this respect, prices of these four grades show the same tendency to behave as a group that was indicated in the study of price variability in Chapter I.

PRICE and CONSUMPTION INDEXES COMPARED

Up to this point, consumption and price fluctuations have been considered from the standpoint of their individual behavior. Several phases of the seasonal indexes will now be examined in an effort to determine the relationship between the seasonality of consumption and prices of wool.

TIMING of SEASONAL TRENDS

Rise from Lows -- Starting with mid-year, when indexes for consumption and prices are at their low points, the relation between the cycles of the two sets of indexes will first be considered. The following table indicates the time that elapses between the upturn in consumption and the advance in prices.

	First Month of Increase In Consumption	First Month of Advance In Prices	Difference in Months
Fine	June	August	2
1/2 Blood	May	August	3
3/8 Blood	June	July	1
1/4 Blood	May	July	2

The outstanding feature shown by this table is the tendency of price advances to follow consumption increases by one to three months. Prices, in their advance from seasonal lows, therefore, show a distinct lag with respect to the increase in consumption.

Peaks of the Cycles -- All four grades are at their peaks of consumption in October. Consumption of Fine and 1/4 Blood, however, reaches the peak level in September and maintains it through October. Prices, on the other hand, do not reach their peaks until January and they reach this point on all four grades in the same month. A distinct lag in the price movement, then, is apparent in reaching peaks as in advancing from low points.

RANGE of SEASONAL VARIATIONS

Timing of the cycles of seasonal fluctuations must not be considered the only indication of a relationship existing between consumption and prices with respect to seasonality. There is another aspect which appears very important, and that is the extent of the variations manifested by the two sets of indexes. Highs, lows, and ranges of consumption and price seasonal indexes differ widely in their fluctuations. This is shown in two tables as follows:-

HIGH, LOW and RANGE of SEASONAL INDEXES of WOOL CONSUMPTION

Years 1924-1932

	High	Low	Range
Fine	127	72	55
1/2 Blood	130	74	56
3/8 Blood	127	77	50
1/4 Blood	135	68	67

HIGH, LOW and RANGE of SEASONAL INDEXES of WOOL PRICES

Years 1924-1932

	High	Low	Range
Fine	108	96	14
1/2 Blood	110	95	15
3/8 Blood	109	94	15
1/4 Blood	111	92	19

SIGNIFICANCE of SEASONAL TRENDS

We have noted two fundamental features of the seasonal trends of wool consumption and prices:- (1), lag in prices, compared with consumption, in the rise from the low points and in reaching peaks, and (2), seasonal fluctuations that are much greater in consumption than in prices.

The lags indicate a dependency of price trends upon consumption. They imply that a rise in consumption normally is followed in one to three months by a rise in prices. A decline in consumption, likewise, presages a price decline in three months. Consumption, therefore, is indicated as a force whose direction and weight exercise some control over the price trend.

Domination of consumption over the wool price trend, however, is by no means complete. If consumption of wool were the only contributing factor in the price trend, any fluctuation in consumption should be followed by an equal change in prices. This is not the case. The range from high to low of seasonal indexes of consumption are roughly three times the range of

indexes for prices. It is necessary, then, to look to some influence beyond consumption for an explanation of the price trend.

OTHER PRICE FACTORS

Several developments associated with the time of year will be examined for their possibilities of influencing the price trend. Their effects will be related to trends of consumption and prices.

It has been noted that the second quarter of the year is the period when indexes for consumption and prices are at their lows. In that period, a number of conditions are worthy of attention.

An outstanding feature of the second quarter of the year is the shearing season. While no figures are available to prove the point, it is likely that around 75 per cent of the entire wool clip in this country is shorn between April 1 and July 1. That means that the market supply of wool is increased tremendously in a relatively short time. Not only is the market supply greatly increased in the second quarter, but the increase comes at a time when consumption is at a low ebb. Thus, to the depressing influence of low consumption is added the weight of another factor which would naturally tend to retard a rise in prices. We have already noted that the price indexes of seasonality for all grades reached a low in June. The end of the drop

in prices corresponds with the approach of the end of the shearing season.

Closely related to the shearing season is the wool dealers' buying season. Normally, dealers buy their year's stocks of wool at the time it is being shorn. While dealers are buying, their viewpoint naturally is not the same as when they are selling wool. Consequently, they are inclined to favor a moderate downward drift in prices because of the effect the decline may have upon growers' ideas of wool values. The combined effect of the wool dealers' attitudes toward prices and the light demand resulting from low consumption tend to work together as a bearish influence upon prices.

The influence of still another factor cannot be left out of the picture. During the second quarter of the year, supplies of wool are apt to be, on the average, much less desirable in character than at any other time after the arrival of a new clip on the market. Buyers logically pick first the best spinning wools available. This tends to leave the most unattractive wools on the market in late Winter and early Spring. Also, the first wools of the season are usually less attractive in character than later shorn wools. The differences between the best and the ordinary wools are not of a nature that can be reflected by the grade and class terms on which quotations are based, but they are reflected in prices, often to a very appreciable extent. For

example, the price range on Strictly Combing Fine Territory wool may be as much as 2-5 cents on a scoured basis. As market quotations are based upon sales, and as dealers also are inclined to withhold their best wools through a dull period, hoping to realize better prices when demand picks up, the character of the wools selling in the second quarter are apt to have a depressing influence upon the price trend.

Summarizing briefly the factors associated with seasonally low wool prices, three, in addition to consumption, operate either to keep prices down or retard their advance in spite of rising consumption toward the close of the second quarter. These factors are:- (1), a large increase in the supply of wool at a time when mill demand is at a minimum, (2), the attitude of dealers toward wool values during the shearing season, which is the dealers' buying season, and (3), the influence that the character of old and early shorn wools have upon quoted market prices at the time when wool is being shorn and bought by dealers.

The period when prices are at their peaks also has associated with it certain conditions tending to give the price trend its characteristic pattern. We have noted that after June the price trend is slowly rising, reaching the highest point in January. Indirectly, consumption probably has some bearing upon this trend for it is high during the third and fourth quarters. Yet, it is doubtful if consumption alone can account for the sharp price

advance in January, because by January, the consumption trend has been downward for two months or more.

The first two months of the year is a period when two developments of significance may take place. These are;- (1) placing repeat orders for Spring goods, and (2), placing initial orders for Fall goods. These two events are anticipated by wool men weeks before they become actualities. Their significance is that, if orders for goods in either or both of these two categories are of large size, large quantities of wool must be purchased by mills to make up the goods. In the event buying takes place in January or February, buyers must cover in a market with supplies greatly reduced. Mills by January have already drawn heavily upon the last season's clip for the third and fourth quarters' consumption requirements. The restricted supplies offer a background for price advances, and it frequently happens that a demand, great enough to result in price advances, takes place in January.

Here, again, we see that consumption of wool, as a determiner of the price trend, is aided by other factors: an increase in demand and a restricted supply.

GENERAL SUMMARY of SEASON TRENDS

The seasonal trend of wool consumption is reflected by a pattern in price movements that indicates a certain amount of dependence of the latter upon consumption. Other factors

than consumption, however, influence the characteristic seasonal fluctuations of prices. This has been shown partly by the fact that prices do not fluctuate as widely as consumption. Also, the heavy increase in supply of wool at shearing time, the buyers' attitude of dealers at shearing time, and the character of the old wool and the early clips on the market all operate at the same time to depress prices. The January rise in wool prices, again, is probably largely a result of the supply situation.

CHAPTER III

SECULARS TREND of WOOL CONSUMPTION and PRICES

The discussion in the previous chapter was confined to those fluctuations in wool consumption and prices that have a tendency to occur at certain times of the year. A study was made to determine the time when these particular kinds of fluctuations occur, the extent of these fluctuations, and the relationship that exists between seasonal changes in consumption and prices.

Attention in this chapter is given to consumption and price changes that have no relationship to any particular time of the year, but rather take place only over a period of years. In Chapter I, it was pointed out that during the period 1924-1932 prices of all grades of wool suffered extensive declines. Consumption, on the other hand, was shown to have exhibitied varied trends. These changes are now going to be examined in an effort to determine the relationship that exists between the long time trends of wool consumption and prices. Data are presented in this chapter to show some of the possible causes of

the changes we have noted.

Scope of Secular Trend Study.-- Secular trends were computed for consumption data on all four grades of wool included in this study. Only two price series, however, were adjusted for secular trend. Of the two price series chosen for secular trend adjustment, one represents the Fine grade which showed a rising consumption trend, and the other represents medium grade wools which had a slight declining tendency.

Fine French Combing Territory wool comprises one of the largest groups of domestic grown wools. This description applies to the greatest bulk of the wool produced in the western mountain range states and in the southwestern states of this country. Fine wools predominate in the clip grown in these sections of the country, and this grade, as indicated in Chart I, showed the most pronounced rising tendency of consumption in the past ten years.

The other grade chosen for secular trend study was Strictly Combing 1/4 Blood Territory wool. While this particular price series was selected from the western grown wools, it represents also a large portion of the better class wools grown east of the Mississippi River, and it has a price trend that follows closely the trend of the 1/4 Blood Fleeces.

Consumption of 1/4 Blood wools tended slightly downward in the past ten years, and so the two price series represent grades with divergent consumption trends.

The selection of price series from grades with the most divergent consumption trends offers opportunity to make a more direct comparison between consumption and prices with respect to the relationship of their long time trends than would be possible by a selection from grades with more similar trends of consumption. If the secular trend of consumption has any appreciable influence upon the long time price trend, it should be shown by a corresponding difference in price trends, especially in two grades with such divergent consumption trends, as was shown by these grades.

Method of computing trends was discussed in Chapter I., and so no further treatment of the subject is given here, except to mention that the same method was used for consumption and prices.

Secular Trends Compared.-- Annual changes in secular trends of consumption and prices of domestic wools, in the series for which trends were computed, are shown in the following table:-

Grade	Consumption (1,000 Pounds)	Prices (Cents per Pound)
Fine	765	-10.8
1/2 Blood	127	(6)
3/8 Blood	47	- 8.8
1/4 Blood	-1.2	(6)

It is noted from the foregoing table that the growth in consumption of Fine wool was very large, and that the trend in prices was sharply downward. Growth in consumption of 3/8 Blood was not nearly as large as that of Fine and the price trend also was downward, but the decline was not quite as large as in the price of Fine. Consumption of 1/4 Blood actually showed a decline. Secular trends were not computed for prices of 1/2 Blood and 1/4 Blood, but the extent of declines in prices of all grades can be seen by reference to the table on page 13, Chapter I, which shows that all nine kinds of wool declined in prices by about the same percentage.

Hence, the trend of consumption apparently had little influence upon the trend of prices. At least, the trend of consumption is definitely eliminated as a causative factor in the price decline. Practically equal price declines took place in all grades regardless of the consumption trends of the respective grades. Fine wool, with an annual growth in consumption

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(6) Not computed.

amounting to more than three quarters of a million pounds, had declines in prices of 78.0 to 78.4 per cent of the highs for the past ten years, and French Combing Territory Fine had an annual price decline of 10.8 cents. Other grades, with consumption trends either only moderately upward or actually slightly downward, had price declines of percentage of highs about equal to those of Fine wools. Therefore, it is evident that wool price declines were associated with some factor other than consumption.

This observation has additional support in Charts IV and V showing average annual prices of Fine French Combing and of 1/4 Blood Strictly Combing Territory wools plotted against secular trends of consumption of the respective grades of greasy Combing domestic wools.

The consumption trend of Fine wool, it is noted from the trend line in Chart IV, rose from 3,700,000 pounds per month in 1924 to 10,600,000 pounds in 1933. This is certainly a very substantial increase, almost tripling in ten years. Yet, during this same period, the average annual prices of Fine French Combing Territory wools in Boston fell from $1.31 per pound, scoured basis, in 1924 and 1925 to $0.44 in 1932, a drop of 66 per cent of the high annual average. In only two years, 1928 and 1933, of the past ten were there rises in annual average prices of this grade. It will later be shown

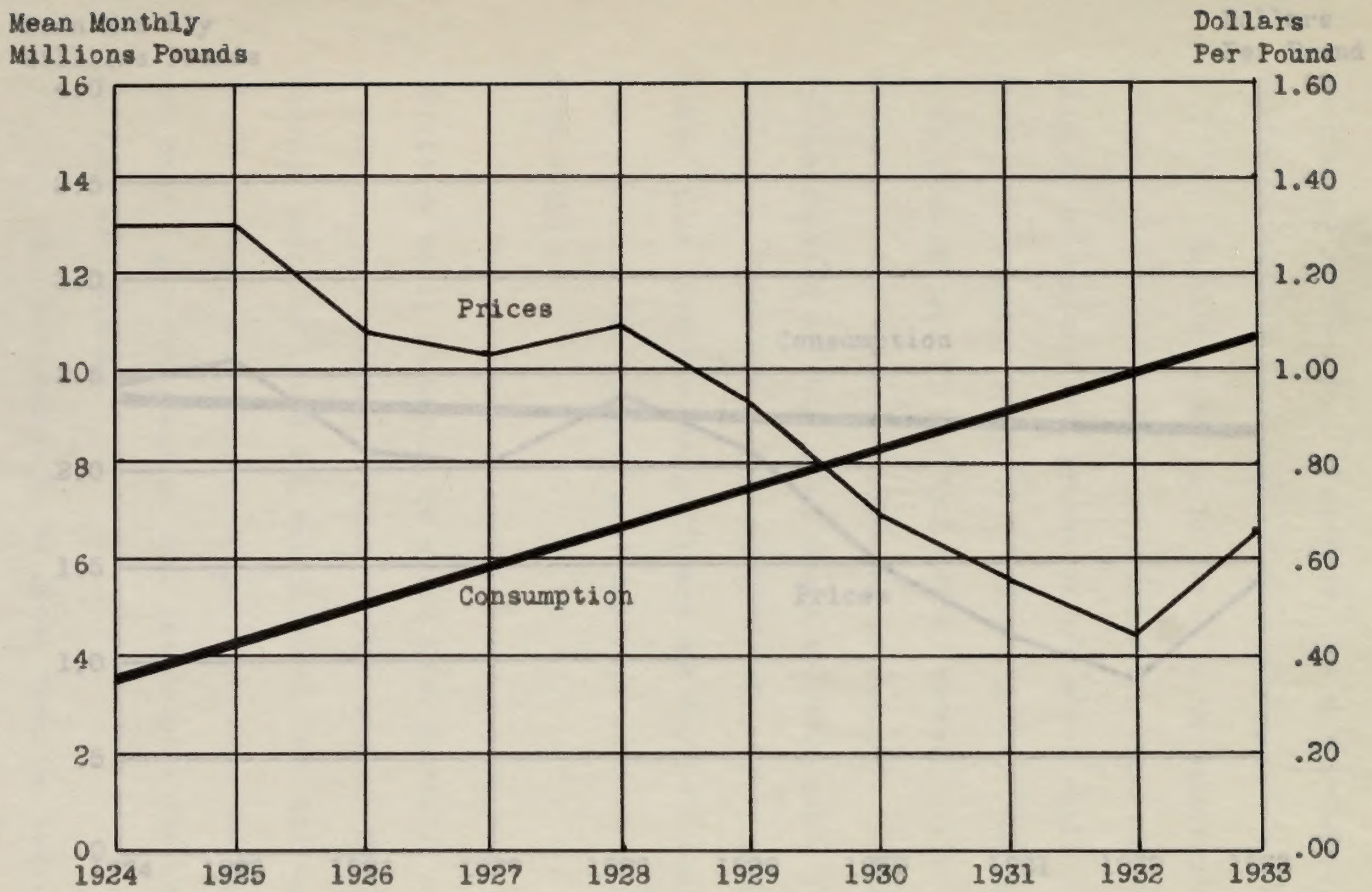

Chart IV.- Secular trend of consumption of greasy combing fine domestic wool and prices of French Combing fine Territory wool.

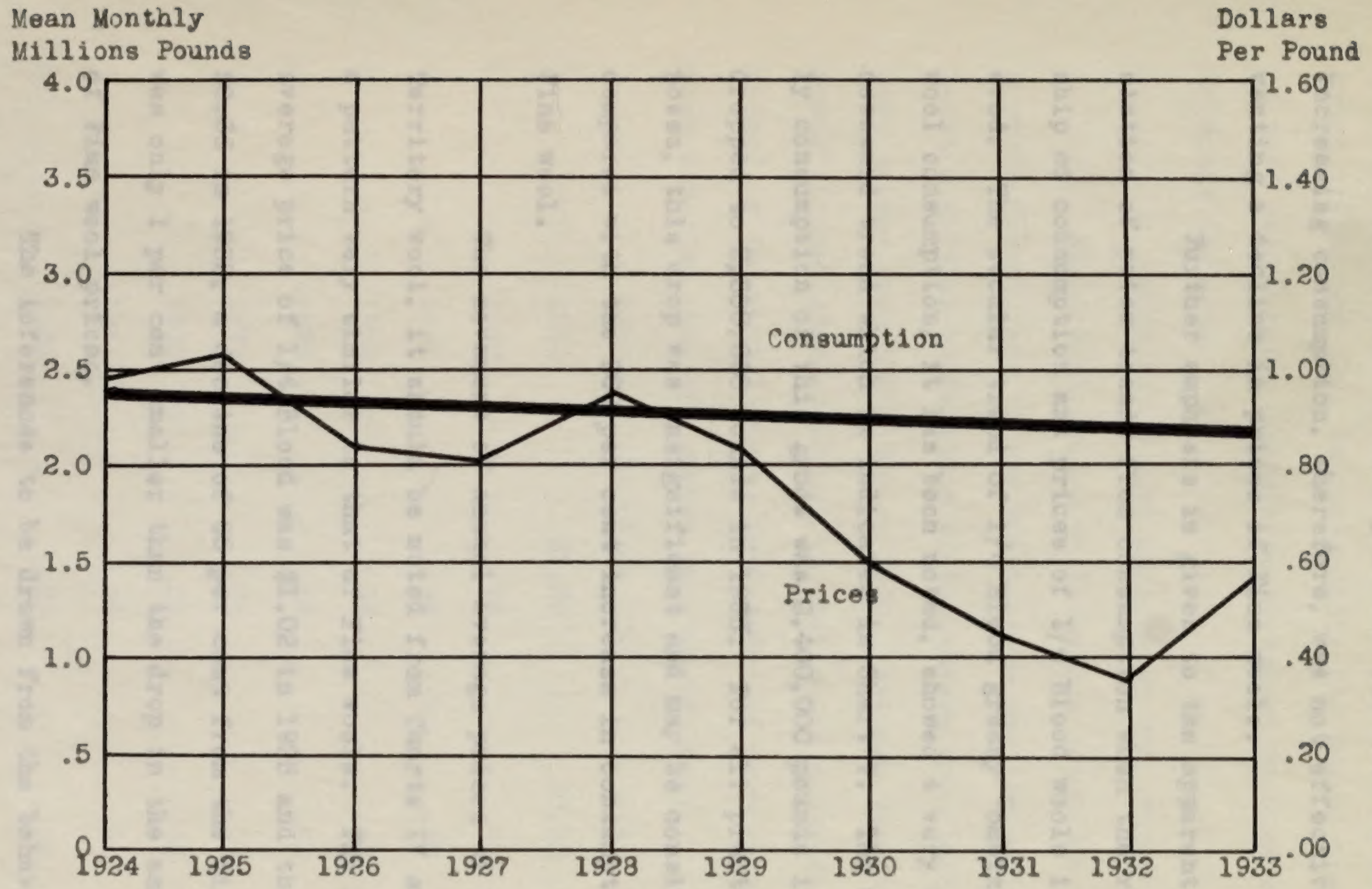

Chart V.- Secular trend of consumption of greasy combing 1/4 blood domestic wool and prices of strictly combing 1/4 blood Territory wool.

that the price rise of 1933 preceded the rise in consumption. Increasing consumption, therefore, was not effective in preventing a decline in prices of Fine wools.

Further emphasis is given to the apparent disassociation of price trends from consumption when the relationship of consumption and prices of 1/4 Blood wools is considered. The secular trend of 1/4 Blood greasy Combing domestic wool consumption, it has been noted, showed a very slight downward trend which is indicated in Chart V. The mean monthly consumption of this grade was 2,400,000 pounds in 1924 and dropped to 2,300,000 pounds in 1933. For all practical purposes, this drop was insignificant and may be considered steady compared with the 200 per cent increase in consumption of Fine wool.

The movement of annual average prices of 1/4 Blood Territory wool, it should be noted from Charts IV and V, showed a pattern very similar to that of Fine wools. The high annual average price of 1/4 Blood was $1.02 in 1925 and the low was $0.36 in 1932, a decline of 65 per cent from the high. This was only 1 per cent smaller than the drop in the annual average of Fine wool prices.

The inferences to be drawn from the behavior of the long time tendencies of wool consumption and prices are:- (1), the rate of consumption did not have much influence upon the

price trend, and (2), responsibility for the downward trend in wool prices must, therefore, be sought in some other economic factors.

ECONOMIC TRENDS RELATED TO WOOL PRICES

World Wool Prices.— Wool is a commodity that has a world market, and so the world price may logically offer at least a partial explanation of the severe drop in domestic wool prices from 1924-1925 to 1932. Average annual prices per pound for two grades of wool at the London auctions are recorded in the United States Department of Agriculture Yearbook for 1934, and are quoted here as follows:-

Year	64s - 67s	56s
1924	$1.30	$0.90
1925	1.15	.77
1926	.96	.59
1927	.96	.69
1928	.98	.76
1929	.76	.58
1930	.51	.34
1931	.37	.24
1932	.29	.20
1933	.46	.32

Of the two grades quoted in London, 64s-67s is similar to domestic Fine and 56s is similar to domestic 3/8

blood.

Another factor that should be remembered when studying London prices is the fact that wools of these two grades are subject to a duty when imported into this country. The duty now is 34 cents per pound, clean content, and before June 1930 it was 31 cents.

Without attempting to make a detailed comparison between London and Boston prices, it is obvious that the 1924 and 1925 prices at London, as in Boston, were distinctly the highest of the past ten years. Another point that emphasizes the similarity of price trends in the two markets is the rise in 1928. Again, the similarity is strengthened by the facts that in both markets the low averages came in 1932 and the averages for 1933 turned upward and rose almost to the 1930 level. The decline from high to low annual average prices at London was about 78 per cent, compared with the declines of around 65-67 per cent in annual average prices of domestic wools at Boston.

As London reflects to a large degree the conditions prevailing in all wool markets of the world, the trend there may be taken as a fair measure of world wool prices. From comparisons made between Boston and London prices, it is evident that the trend of world wool prices was more nearly comparable with the domestic price trend than was that of consumption in

the United States.

Ordinarily, the United States must import a substantial amount of wool to meet consumption requirements, which in the past ten years have amounted to approximately one sixth of the world production. Domestic production has been, roughly, one tenth of the world's clip. The deficit must be made up by importing, and imported wools must be bought at world prices. Consequently, rising world prices would naturally tend to lift the domestic wool price level because supply is less than the demand. In a similar manner, declining world prices tend to depress domestic prices because, if the latter remained below the world level for any considerable length of time, importing foreign wools would be stimulated and the imported foreign wools would compete directly with domestic wools. World prices, however, may rise without a corresponding effect upon domestic prices, especially if the domestic supply is adequate to meet requirements. The tariff, also, may act as a buffer preventing as severe declines in domestic prices as may take place in foreign markets.

With this background, it is not difficult to appreciate the intimate relationship between domestic and world prices for wool. In the past ten years, declining wool prices abroad offered constant threats to prices of domestic wools in

spite of the protection of the tariff and increasing domestic consumption. Hence, prices of wool in this country apparently either had little relationship to consumption, or, if they did have any relationship to consumption, it was of a negative character.

We have already noted how wool prices in this country declined more than the general price level during the period 1924-1932. This decline took place in spite of a rising trend in consumption. We have noted, also, that world prices of wool traced a pattern very similar to that of domestic prices except that the decline was even greater than the decline in domestic prices. Apparently, then, the wool price trend in the past ten years has been due to some widespread underlying cause, or causes.

The one phenomenon that has been commonly experienced by the whole world in the past ten years has been a period of prosperity followed by the most severe depression this generation has known. Wool is a raw material produced in frontier regions and manufactured, or consumed, in the most highly industrialized regions of the world. Hence, the state of industry may have some bearing upon the wool price trend. Therefore, we shall turn for a moment to the consideration of the bearing the depression may have had upon wool prices.

United States Industrial Production.-- The Federal Reserve Board's index of industrial production, based upon the 1923-1925 average, for the years of high and low wool prices were as follows:-

Year	Index of Industrial Production (7)
1924	95
1932	64

These index numbers indicate the terrific drop in business activity that took place during the period when prices of wool declined 65-67 per cent of their high annual averages. They show how employment of the ultimate consumers of wool was curtailed, how incomes must have been reduced in the past ten years, and consequently, how the ability of many consumers to buy clothing must have been restricted.

Factory Payrolls.-- A measure of consumer purchasing power of even greater significance than the industrial production index is the Federal Reserve Board's index of factory payrolls. These indexes, based upon the 1923-1925 average, follow:-

Year	Index of Industrial Payrolls (8)
1924	95.7
1932	45.3

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(7) World Economic Review, 1933, page 83-84, U. S. Bureau of Foreign and Domestic Commerce.

(8) World Economic Review, 1933, page 102, U. S. Bureau of Foreign and Domestic Commerce.

From consideration of the indexes of industrial production and factory payrolls, it becomes apparent that consumer purchasing power has suffered drastic curtailment in the past ten years and that the trend in purchasing power has followed a course very similar to that of wool prices.

Wool Production.-- During the time when declining purchasing power was having an adverse effect upon wool prices, changes of considerable magnitude were taking place in the wool supply. World and United States production of wool for years that represent approximately the low and the high of the period covered by this study are shown in the following table:-

Production of Wool (9)
(Millions of Pounds)

Year	World	United States
1924	3,184	281
1931	3,677	438
Increase	493	157
Per cent Increase	13	55

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(9) World Wool Prospects, July 31, 1934; Mimeographed publication of the United States Bureau of Agricultural Economics.

World wool production in 1931 was estimated at 3,677,000,000 pounds, which was 493,000,000 pounds greater than in 1924. This was an increase of more than 13 per cent. The domestic annual production had increased 157,000,000 pounds, or more than 55 per cent over that of 1924. A very large portion of the increase in the production of wool came in states that are predominantly producers of Fine wools. It was the Fine grade, we had noted earlier in this report, that had the largest increase in consumption. This, apparently, has a definite bearing upon the price trend. The increasing weight of the wool clips, coming at a time when consumer purchasing power was declining, placed steadily growing burdens upon wool markets in order to get one clip into consumption channels before the next arrived. The consequence was repeated reductions in prices in order to dispose of each year's production.

A Competing Fiber.— A new industry, the synthetic production of a textile fiber called rayon, had come to hold a very substantial place in the textile industry by 1924. Production of rayon was of negligible proportions in 1920, but in 1924 the consumption of this fiber amounted to 42,200,000 pounds, according to the Textile Organon (10). By 1932, consumption had

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(10) Textile Organon, February, 1934, published by Tubize Chatillon Corporation, New York.

reached 152,200,000 pounds, and comprised 5.2 per cent of all the textile fibers used in that year. A fiber with a growth in use, such as that of rayon, cannot be ignored in the study of price trends of other fibers.

A significant factor in the development of the rayon industry during the past ten years is the decreasing price of the product. The average price of 150 denier rayon on the New York market was $2.11 per pound in 1924, according to figures published monthly by the United States Department of Commerce in the Survey of Current Business. The average price in 1932 was $0.64 which represented a decline of nearly 70 per cent from the average for 1924. This decline was greater than was shown by wool prices.

While it is true that rayon probably cannot be substituted for wool in all, or even in a substantial portion, of present outlets, it is quite likely that the growth in production and the price of rayon has had a very important influence upon the wool price trend. Rayon competed with wool in another way. It was a competitor for the existing, a diminishing, purchasing power. Goods made of rayon are attractive to consumers and they are widely advertised. An increasing portion of the consumers' purchasing power went to the producers of rayon. This meant a decrease in expenditures for wool goods. Thus, even though the actual displace-

ment of wool in wool cloth was small, rayon cut into the wool textile field and became a price determining factor in the wool market.

Conclusions.-- The domestic wool price trend has been downward from 1924 to 1932. Consumption during that period showed a rising tendency. It is evident, then, that increasing consumption by itself is not necessarily accompanied by rising prices for wool.

Economic factors with trends closely resembling that of the domestic wool price trend and probably having some influence upon it were:-

1. The world wool price trend
2. Industrial production
3. Factory payrolls
4. Wool production
5. Competition from rayon

The world supply and price of wool enters definitely into the price picture of domestic wools. Industrial conditions that effect the purchasing power of consumers of wool vitally influence the price of that commodity. Domestic wool prices have suffered in the past ten years from the competition of rayon which has been consumed in this country at an increasing rate and at declining prices. There is, therefore, considerable evidence that the downward trend in domestic wool prices during

the past ten years has been the result of repeated efforts to secure outlets for an increasing production of wool in the face of diminishing purchasing power and growing competition from a synthetic fiber.

CHAPTER IV

CYCLICAL TREND of WOOL CONSUMPTION and PRICES

Scope of Cyclical Trend Study.-- Cyclical indexes were computed for the monthly consumption of four grades of greasy Combing domestic wools and are presented in Table IV of the Appendix.

Similar indexes were computed for prices of two grades representative of important lines of domestic wools. These indexes are shown in Table V in the Appendix.

Cyclical indexes for consumption of Combing Fine domestic wools and for prices of French Combing Fine Territory wool are shown graphically in Chart VI. This chart is the basis of much of the discussion in this Chapter.

Cyclical Trends Compared.-- The chart of cyclical indexes shows very clearly that changes in trend are more frequent and more extensive in consumption than they are in prices.

The trend line for consumption in Chart VI shows a tendency to move in cycles of about two years in duration.

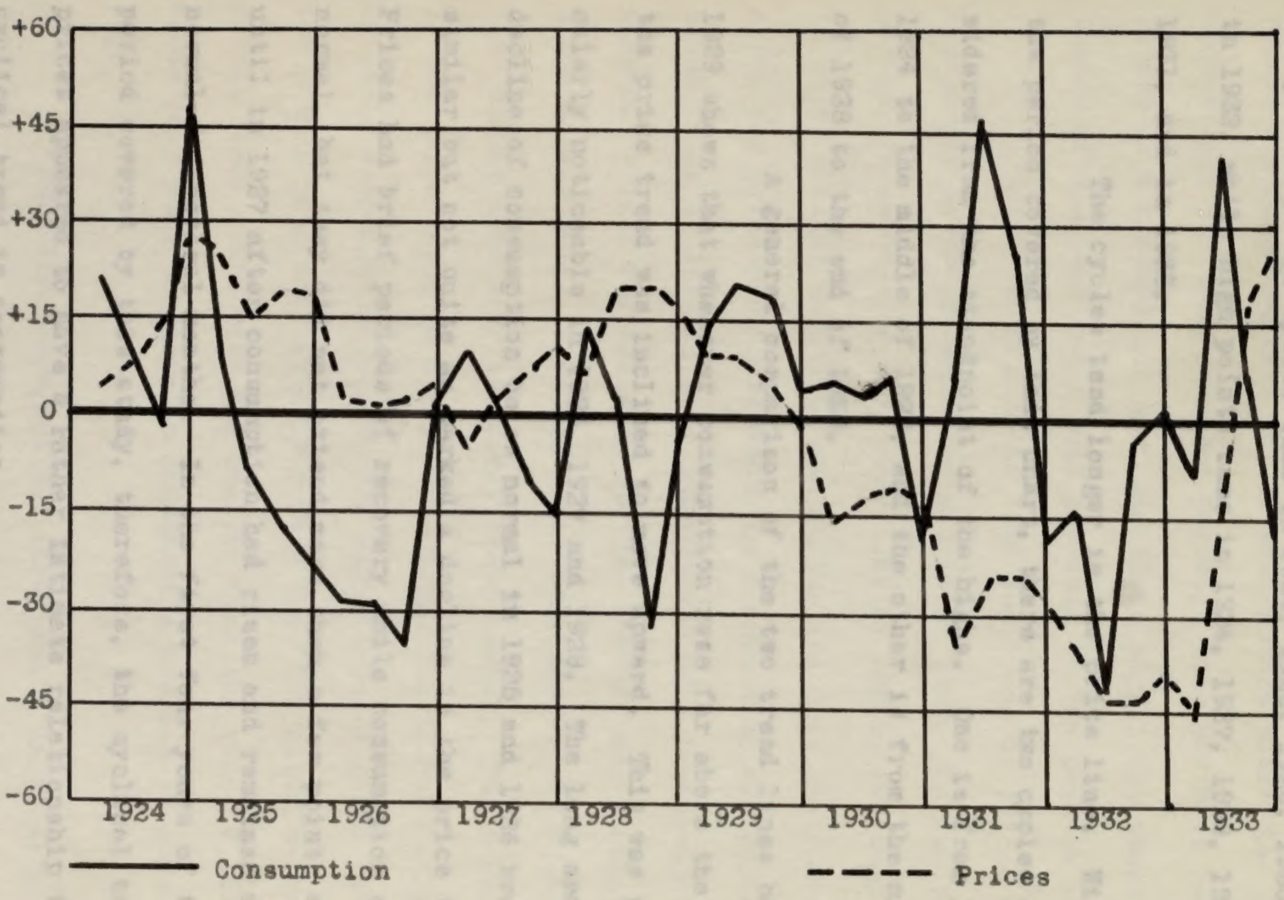

Chart VI.- Cyclical trends of consumption of greasy combing fine domestic wool and prices of fine French Combing Territory wool.

Low points in the cycles came in 1924, 1926, 1928, 1930 and in 1932, while high points came in 1924, 1927, 1928, 1929, 1931, and in 1933.

The cycles tend longer in the price line. Within the period covered by this chart, there are two cycles considered from the standpoint of the highs. One is from late 1924 to the middle of 1928, and the other is from the middle of 1928 to the end of 1933.

A general comparison of the two trend lines before 1929 shows that whenever consumption rose far above the normal the price trend was inclined to move upward. This was particularly noticeable in 1924, 1927 and 1928. The long and deep decline of consumption below normal in 1925 and 1926 brought a similar but not quite as marked a decline in the price trend. Prices had brief periods of recovery while consumption was below normal, but they did not extend more than a few points at a time until in 1927 after consumption had risen and remained above normal for several months. In the first four years of the period covered by this study, therefore, the cyclical trend of prices appeared to have a rather intimate relationship to the cyclical trend in consumption.

In the latter part of 1927, however, the price trend apparently ignored the dip in consumption, and again in 1928

prices continued to rise for several months after the peak of consumption for that year had passed. This may have been the result of a consumption that was above normal for about two thirds of the year and a half previous to the peak in 1928.

After the middle of 1928 the trend of prices was distinctly downward until the middle of 1932. During this period, recoveries were of very limited extent and they tended to be of shorter duration than during the previous years. Also, the relationship between the consumption and price trend lines appears to have undergone a very fundamental change. Prices continued to decline farther and farther below normal until July 1932 while consumption was at some time during each year decidedly above normal. The response of the price trend to a rise in consumption diminished steadily. In 1931, consumption rose to the highest point since 1924 and yet prices rose only about 8 points from 30 points below the normal line. This rise was smaller than the rise in the previous year when the rise in consumption was not as great as in 1931.

Expanding consumption, then, had a diminishing positive effect upon the price trend for three years following 1928. In the latter part of 1932 and again in 1933, prices again began to show a stronger response to rising

consumption.

It is worthwhile to consider, at this point, some developments that may have influenced the trends we have noted in the cyclical indexes of consumption and prices.

In Chapter III, we saw that the declining secular trend in wool prices was associated with a rapid growth in the domestic wool clip. We shall now examine the trend in domestic wool production over the ten-year period and see if it has any relationship to the changes we have noted in cyclical fluctuations of consumption and prices. The annual production of domestic wool for each of the ten years is indicated in the following table:- (11)

Year	Millions of Pounds
1924	281
1925	300
1926	318
1927	340
1928	366
1929	382
1930	412
1931	438
1932	412
1933	429
Ten-year Average	369

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(11) Estimates of the World Wool Prospects, July 31, 1934, U. S. Bureau of Agricultural Economics.

Production of wool in the United States rose from 281,000,000 pounds in 1924 to 438,000,000 pounds in 1931. The annual average production for the ten-year period was 369,000,000 pounds, which was very close to the production in 1928. Hence, before 1928, production was below the average, while after that year production was decidedly higher than average.

We have noted that 1928 marked a turning point in the relationship between the cyclical trends of wool consumption and prices. Before that year, prices seemed to be quite responsive to the consumption trend but in following years until 1932 responses of prices to rising consumption noticeably diminished.

The production figures appear to offer assistance in the interpretation of the cyclical trends for the period 1929-1932. The rapid growth in production of wool did not create any serious price disturbance until the total clip began to amount to more than 350,000,000 pounds. After that volume was reached, the growth in production continued and resulted in a market surplus which could not be absorbed except at progressively lower price levels.

In addition to the increasing supply of domestic wool, the cyclical trend of wool prices was probably influenced

by rayon prices. During 1929, the year in which the wool price trend started a long decline, 150 denier rayon prices were reduced from $1.50 to $1.15 per pound. The expanding use of rayon, as pointed out in the previous Chapter, and the rapidly declining prices of that fiber served to increase the pressure upon wool prices created by the large increase of the domestic wool clip.

The extremely vigorous recovery of wool prices in 1933 was not a result solely of an increase in consumption. Undoubtedly, the rapid and extended rise in consumption was a contributing factor in the rise of wool prices, but there was another development that probably was responsible to a great extent for the rise in both prices and consumption. Evidence of this is the fact that prices started to rise before the upturn in consumption. In this instance, increased consumption apparently was stimulated by an advance in prices.

The event that was associated prominently with the period in 1933 when prices and consumption began to rise was the embargo placed upon the export of gold from the United States. On the morning after the embargo was declared, a number of prominent wool houses in Boston marked up prices of wool 1-2 cents per pound in spite of an almost total lack of demand from mills at the time. Previous to this, prices had shown a strengthening tendency from the time of the bank

holiday as a result of a growing belief in the trade that inflation in some form was inevitable. In accordance with this belief, many wool men felt that raw materials would be more profitable to hold than bank balances or accounts receivable. The embargo on gold clinched the argument, in the opinion of trade leaders, and they immediately confirmed their beliefs by a stiff advance in prices and the adoption of a firm policy of holding out for the higher prices. Manufacturers hesitated for a few days and then began with a rush to buy almost every kind of wool on the market.

After the buying movement in the Spring of 1933 was under way, price advances came rapidly and seemingly at the least pretense, and the advances apparently presented no obstacles to making sales. Buyers had caught the fever that the trade had had for some weeks. They grabbed at any kind of wool offered and then asked what price was wanted for it. Manufacturers, like the dealers, had become convinced that prices were going to be higher and they too acted upon their beliefs.

During this buying movement of feverish intensity buyers and sellers alike had their eyes on one barometer--the value of the United Statee dollar in foreign exchange. Close

attention to foreign exchange rates is always a matter of necessity for the wool man who imports wool, but ordinarily the dealer in domestic wools does not show much concern over the exchange rate of the dollar unless domestic and world wool price levels are such that foreign wools begin to look like an attractive investment. In 1933, however, the entire wool trade showed a keen interest in the value of the dollar in foreign exchange. They took this as a measure of inflation which they thought was taking place. Every decline in the dollar was the signal for another advance in wool prices.

In view of the prominence of monetary changes as a factor in the wool market in 1933, it is interesting to note the changes that took place in the value of the dollar in that year. The value of the dollar expressed in United States gold dollars at original par is shown by months in 1933 in the following table:-

Month	Value in Dollars (12)
January	1.0380
February	.9987
March	.9951
April	.9543
May	.8502
June	.8134
July	.7170
August	.7303
September	.6747
October	.6696
November	.6257
December	.6390

We see from this table that wool prices rose as the value of the dollar declined. Consumption also was high in that period, but prices continued to rise even after consumption had turned downward and had gone below normal. These subsequent price advances were in line with the decline in the value of the dollar.

Not all of the price advance in 1933 could be attributed to the decline in the dollar. If prices had advanced only to the extent of the decline in the dollar,

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(12) World Economic Review, 1933, page 290, United States Bureau of Foreign and Domestic Commerce.

then Fine French Combing Territory wool which was quoted at 40.5 cents in February should have risen only to 65 cents in November. The quotation in November, however, was 81.0 cents. Hence, the difference between the theoretical price based upon the depreciated dollar and the quoted price can probably be attributed to the high consumption rate. This is indicated by the smaller price advances with declines in the dollar, that took place after consumption declined compared with the advances while consumption was rising.

Summary.-- Cyclical trends of consumption and prices of wool showed varied relationships during different period of the past ten years. Before 1929, the price trend was quite sensitive to a change in the trend of consumption. From early 1929 to the middle of 1932, the relationship changed and in this period prices were very responsive to a decline in consumption but an increase had little positive effect upon prices. This behavior of prices was associated with a large increase in the size of the domestic wool clip and with strong competition from rayon which had a tremendous increase in consumption and a declining price trend. Cyclical indexes indicate that constant lowering of

prices was necessary after 1928 in order to move the increasing supply of wool into consumption. Increasing consumption was effective as a factor in turning wool prices upward when the supply of wool was about, or below, the average for the past ten years, but when production rose above the average the rate of consumption appeared to be determined somewhat by the price. Hence, it is apparent that the rate of wool consumption alone cannot be taken as a basis for making a forecast of the wool price trend.

CHAPTER V

GENERAL SUMMARY

Wool prices have fluctuated more violently since 1924 than the general wholesale commodity prices. Factors that influence this departure from the general price pattern are naturally of interest to wool growers, dealers, manufacturers, clothiers, and bankers. This study was undertaken for the purpose of determining the relationship of wool consumption to the price trend.

Prices and consumption of wool each showed a variety of kinds of fluctuations. High and low points in the series of each group of statistics tended to fall in certain times of the year, and so indexes were computed for seasonality. Prices of all grades of wool showed a declining tendency after 1924 which lasted until the middle of 1932. Consumption, on the other hand, tended to increase in most grades. This necessitated correction for secular trend in order to determine the true cyclical fluctuations.

Computation of indexes was based upon data for

the years 1924-1932, inclusive. Inspection of the original data indicated that this period covered two complete cycles in prices and coincided with the ends of cycles in consumption.

Interest in a statistical analysis of the kind employed for the purpose of this report was aroused by the very weak response of wool prices to the unusually large consumption in 1931. In previous years, prices of wool had shown a tendency to rise with an increase in consumption. A study to determine the nature and causes of the changed relationship between prices and consumption of wool can best be made by isolation and individual consideration of each kind of fluctuation.

Seasonal and cyclical fluctuations of consumption were found to be much greater than those of prices. In both kinds of fluctuations in consumption, the change in any one year is sometimes more than 100 per cent of normal and changes of around 50 per cent were relatively common.

Seasonal fluctuations on the average for the period studied were around 15-20 per cent of normal. This means that the prices of wool may normally be expected to fluctuate within the year from seasonal influences about 3-4 cents per pound, grease basis, to growers, when the price level is

around 20 cents, and 10-15 cents, scoured basis, to dealers, when the prices range 65-70 cents as in late 1934.

Seasonal patterns for the various grades of wool were quite similar in consumption and price indexes. The latter, however, showed a lag of about three months with respect to changes in consumption.

The lag in the seasonal price trends suggested that the latter were dependent upon consumption, but there are other seasonal factors that are timed very much like the price trends. Low seasonal indexes for prices come in June when shearing of the new clip is at its height. The seasonal peak of prices comes in January when large orders for goods are normally placed and stocks of wool are approaching their low point.

Seasonality of wool prices and consumption has this significance: haste of wool growers to sell their clips at shearing time may fail to net the largest return while holding beyond late Fall or early Winter may result in a sale on a slow market; dealers must use caution in making purchases late in the year unless they are reasonably certain of an outlet within a short time; and, manufacturers should cover a large part of their normal requirements during the Summer and early Fall and should avoid the necessity of heavy buying in January and February. These

recommendations, however, must not be followed blindly for seasonality itself may change or be modified considerably by changes that manifest themselves only after several years. This was brought out by a study of secular trends.

Consumption of all grades of wool, except 1/4 Blood, had rising secular trends. The declining trend in 1/4 Blood was of little significance. During the same period, prices of all grades showed severe and about equal declines in secular trends. The diversity of trends in consumption and prices indicated clearly that consumption is not at all times the dominant factor in the price trend.

Several factors were studied to determine their relationship to the diversity of trends noted in prices and consumption of wool. It was found that world wool prices had followed a trend very similar to that of domestic prices. Also, the purchasing power of the consumers in this country, as indicated by factory payrolls, had suffered a severe decline.

Two other factors closely related to the trend of wool prices were:- (1), a large increase in the domestic production of wool, and (2), competition from rayon.

An increase of 55 per cent in the United States

production of wool from 1924 to 1931 became burdensome under conditions which brought declining world wool prices and domestic purchasing power. In order to keep the increasing domestic clip moving into consumption, prices were repeatedly lowered.

The consumption of rayon in this period made rapid strides. Furthermore, prices of this fiber have been constantly declining and the decline has been greater than in wool prices. While actual substitution of rayon for wool has been limited, rayon goods have offered keen competition for the available, and declining, purchasing power.

Thus, it is seen that up to 1928 wool consumption was, at least partially, a causative factor in the wool price trend. After that year, however, wool consumption was more or less a dependent factor, increases mostly following wool price declines which were apparently influenced by declining world wool prices, increasing domestic production of wool, curtailed purchasing power of the consumer, and competition from rayon.

The depressive influence of these same factors upon wool prices was further emphasized by the cyclical indexes. Fundamental changes were noted in the relationship

of price to consumption cycles after several years of rapid growth in the size of the domestic wool clip. It may be more than a coincidence that wool prices declined steadily during the same period that domestic production of wool kept on rising above the ten-year average, and then began an upward trend after the production peak had been reached. Increased competition from rayon and diminished purchasing power of consumers were developments that corresponded in their timing with low wool price levels compared to the rate of wool consumption.

The susceptibility of wool prices to sudden and marked changes in trend as a result of extraordinary economic developments was seen in the advance of 1933. In view of the relationship that had prevailed between consumption and prices in the previous four years, that advance was much greater than could be accounted for by the rise in consumption. There is statistical evidence, however, that the large consumption of 1933 had some positive effect upon the price trend, but it was evident, also, that the consumption rise followed rather than led the price advance brought by monetary changes.

The methods of statistical analysis used in this study are of great assistance in determining the soundness of the wool price level at any given time. The seasonal indexes and the computed secular trends by themselves disclosed valuable information, but their greatest value was found in correcting original data to determine the cyclical trends. The cyclical indexes placed consumption and price statistics on a common basis which facilitated comparisons of trends.

BIBLIOGRAPHY

Behavior of Prices, by Frederick C. Mills, published by the National Bureau of Economic Research, Inc., New York, 1927. References: page 39, Variability of Commodity Prices, and page 56, Measurement of the Frequency of Monthly Price Changes.

Crops and Markets, published monthly by the United States Department of Agriculture. References: Tables of Monthly Average Prices of Wool at Boston, compiled by the Bureau of Agricultural Economics.

Statistics for the Business Man, by William G. Sutcliffe, published by Harper & Bros., New York, 1930. References: pages 183, 211, and 225, on methods of computing Seasonal, Secular, and Cyclical Trends.

Survey of Current Business, published monthly by the United States Department of Commerce. Prices of Rayon on the New York Market.

Textiles and the Microscope, by Edward Robinson Schwarz, Assistant Professor of Textile Technology, Massachusetts Institute of Technology, published by McGraw-Hill Book Company, Inc., New York, 1934. References: Key for Quality Determination, page 279, and Conversion Table - Microns to Inches, page 77.

Textile Organon, February 1934, published by Tubize Chatillon Corporation, New York. United States consumption of rayon.

Wool Consumption Reports, released monthly by the United States Bureau of the Census. Source of the data on wool consumption.

Wool-Growing Industry, The, a report by the United States Tariff Commission, 1921. Reference: Bases for tentative length divisions in wool grades, page 217.

World Economic Review, 1933, published by the United States Department of Commerce, 1934. References: pages 83-84, page 92, page 102, and page 290, indexes of Industrial Production, Wholesale Prices, and Industrial Payrolls, and Value of the Dollar in Gold, respectively.

World Wool Prospects, July 31, 1934, mimeographed monthly publication of the United States Bureau of Agricultural Economics, World and United States production of wool.

Yearbook of Agriculture, 1934, published by the United States Department of Agriculture, page 619, wool prices at London.

APPENDIX

TABLE I

MONTHLY AVERAGE PRICES OF COMBING WOOLS AT BOSTON

STRICTLY COMBING FINE (64S,70S,80S) FLEECE
(DOLLARS PER POUND SCOURED BASIS)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	1.369	1.700	1.230	1.095	1.190	1.123	.823	.718	.595	.464
FEBRUARY	1.375	1.666	1.198	1.095	1.195	1.102	.795	.725	.575	.460
MARCH	1.425	1.544	1.158	1.095	1.195	1.061	.782	.725	.537	.468
APRIL	1.375	1.354	1.125	1.080	1.195	1.015	.761	.665	.501	.481
MAY	1.352	1.240	1.075	1.052	1.201	.989	.742	.632	.439	.632
JUNE	1.288	1.292	1.065	1.055	1.205	.962	.745	.619	.383	.720
JULY	1.295	1.355	1.092	1.095	1.180	.939	.754	.633	.368	.775
AUGUST	1.370	1.295	1.095	1.095	1.175	.935	.760	.635	.407	.790
SEPTEMBER	1.415	1.267	1.101	1.102	1.160	.932	.760	.647	.490	.816
OCTOBER	1.483	1.268	1.125	1.130	1.127	.899	.750	.618	.492	.830
NOVEMBER	1.562	1.289	1.125	1.145	1.125	.890	.740	.610	.483	.840
DECEMBER	1.665	1.292	1.101	1.145	1.125	.846	.725	.610	.466	.860
AVERAGE	1.414	1.380	1.124	1.099	1.173	.974	.761	.653	.478	.678

STRICTLY COMBING 1/2 BLOOD (58S,60S) FLEECE
(DOLLARS PER POUND SCOURED BASIS)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	1.269	1.531	1.159	.975	1.052	1.090	.798	.620	.515	.420
FEBRUARY	1.275	1.564	1.130	.975	1.070	1.072	.758	.610	.512	.402
MARCH	1.310	1.389	1.056	.975	1.070	1.028	.732	.589	.484	.410
APRIL	1.268	1.235	1.012	.960	1.070	1.005	.702	.574	.446	.428
MAY	1.221	1.140	.980	.940	1.070	.981	.680	.550	.386	.565
JUNE	1.174	1.169	.953	.937	1.071	.945	.675	.521	.339	.640
JULY	1.171	1.202	.950	.958	1.068	.937	.675	.535	.321	.696
AUGUST	1.190	1.142	.950	.975	1.075	.945	.675	.540	.362	.710
SEPTEMBER	1.246	1.125	.955	.978	1.075	.945	.675	.538	.435	.741
OCTOBER	1.307	1.162	.994	.992	1.075	.913	.658	.524	.435	.760
NOVEMBER	1.398	1.192	1.000	1.005	1.090	.900	.650	.515	.431	.770
DECEMBER	1.483	1.194	.980	1.005	1.090	.846	.640	.515	.420	.775
AVERAGE	1.276	1.254	1.010	.973	1.073	.967	.693	.553	.424	.610

APPENDIX

TABLE I (CONTINUED)

STRICTLY COMBING 3/8 BLOOD (56S) FLEECE
(DOLLARS PER POUND SCOURED BASIS)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	1.081	1.362	1.004	.825	.932	1.025	.741	.504	.435	.366
FEBRUARY	1.110	1.365	.948	.825	.961	1.022	.671	.470	.432	.360
MARCH	1.135	1.241	.892	.825	.965	.991	.642	.442	.399	.359
APRIL	1.114	1.083	.852	.810	1.001	.935	.613	.436	.368	.376
MAY	1.075	.932	.820	.780	1.019	.852	.558	.420	.318	.536
JUNE	.970	.938	.797	.777	1.055	.840	.555	.408	.284	.609
JULY	.949	1.002	.815	.792	1.030	.844	.555	.421	.270	.650
AUGUST	1.026	.970	.815	.815	1.010	.850	.562	.436	.308	.672
SEPTEMBER	1.080	.971	.815	.821	1.014	.861	.565	.445	.412	.721
OCTOBER	1.125	.990	.841	.868	1.015	.863	.556	.435	.408	.760
NOVEMBER	1.212	1.010	.850	.885	1.025	.849	.541	.435	.382	.770
DECEMBER	1.314	1.025	.830	.885	1.025	.798	.531	.435	.370	.793
AVERAGE	1.099	1.074	.857	.826	1.004	.894	.591	.441	.366	.581

STRICTLY COMBING 1/4 BLOOD (48S,50S) FLEECE
(DOLLARS PER POUND SCOURED BASIS)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	.920	1.260	.935	.745	.858	.945	.680	.462	.370	.339
FEBRUARY	.955	1.231	.899	.745	.890	.932	.620	.425	.368	.330
MARCH	.955	1.151	.830	.745	.895	.900	.585	.396	.348	.328
APRIL	.932	.955	.780	.730	.920	.838	.549	.386	.314	.342
MAY	.894	.875	.734	.714	.947	.771	.516	.369	.278	.503
JUNE	.790	.886	.714	.707	.955	.755	.525	.360	.248	.568
JULY	.787	.925	.735	.746	.952	.759	.525	.371	.244	.604
AUGUST	.825	.881	.739	.750	.940	.765	.525	.386	.275	.623
SEPTEMBER	.935	.871	.740	.760	.944	.765	.525	.388	.382	.672
OCTOBER	1.023	.915	.759	.794	.945	.753	.519	.375	.376	.695
NOVEMBER	1.088	.944	.765	.807	.945	.746	.502	.370	.356	.700
DECEMBER	1.225	.965	.749	.815	.945	.725	.489	.370	.345	.705
AVERAGE	.944	.988	.782	.755	.928	.805	.547	.388	.325	.534

TABLE I (CONTINUED)

STRICTLY COMBING FINE (64S,70S,80S) TERRITORY
(DOLLARS PER POUND SCOURED BASIS)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	1.387	1.675	1.272	1.095	1.160	1.135	.822	.684	.578	.440
FEBRUARY	1.390	1.644	1.238	1.095	1.165	1.105	.790	.665	.560	.440
MARCH	1.425	1.531	1.179	1.103	1.165	1.078	.782	.665	.538	.456
APRIL	1.377	1.379	1.156	1.092	1.172	1.045	.759	.657	.491	.485
MAY	1.352	1.265	1.118	1.075	1.193	1.002	.752	.635	.436	.624
JUNE	1.288	1.296	1.104	1.075	1.205	.974	.760	.615	.384	.700
JULY	1.295	1.369	1.160	1.106	1.198	.942	.760	.619	.365	.774
AUGUST	1.370	1.321	1.160	1.110	1.153	.940	.760	.635	.406	.791
SEPTEMBER	1.415	1.290	1.160	1.114	1.125	.931	.762	.621	.478	.818
OCTOBER	1.471	1.280	1.160	1.125	1.125	.899	.750	.594	.485	.830
NOVEMBER	1.541	1.314	1.136	1.125	1.132	.880	.731	.590	.467	.840
DECEMBER	1.636	1.314	1.097	1.125	1.135	.845	.721	.590	.450	.850
AVERAGE	1.412	1.390	1.162	1.103	1.161	.981	.762	.631	.470	.671

FRENCH COMBING FINE (64S,70S,80S) TERRITORY
(DOLLARS PER POUND SCOURED BASIS)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	1.273	1.538	1.205	1.025	1.082	1.085	.773	.635	.535	.410
FEBRUARY	1.314	1.512	1.171	1.025	1.093	1.050	.752	.615	.525	.405
MARCH	1.325	1.386	1.100	1.025	1.098	1.030	.740	.615	.502	.428
APRIL	1.264	1.301	1.080	1.025	1.105	1.005	.727	.606	.462	.459
MAY	1.250	1.215	1.028	1.005	1.119	.962	.715	.586	.406	.603
JUNE	1.182	1.231	1.015	1.005	1.125	.942	.715	.565	.360	.680
JULY	1.191	1.282	1.025	1.020	1.119	.920	.715	.571	.339	.751
AUGUST	1.280	1.256	1.025	1.025	1.091	.920	.720	.580	.377	.762
SEPTEMBER	1.316	1.261	1.031	1.042	1.065	.906	.720	.563	.440	.788
OCTOBER	1.371	1.258	1.065	1.058	1.065	.861	.702	.540	.440	.800
NOVEMBER	1.444	1.258	1.058	1.065	1.080	.840	.686	.535	.428	.810
DECEMBER	1.520	1.238	1.021	1.065	1.085	.815	.666	.535	.412	.820
AVERAGE	1.311	1.311	1.069	1.032	1.094	.945	.719	.579	.436	.643

APPENDIX

TABLE I (CONTINUED)

STRICTLY COMBING 1/2 BLOOD (58S, 60S) TERRITORY
(DOLLARS PER POUND SCOURED BASIS)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	1.291	1.562	1.190	.995	1.078	1.100	.799	.634	.540	.425
FEBRUARY	1.335	1.562	1.162	.995	1.125	1.081	.760	.610	.535	.412
MARCH	1.335	1.378	1.062	1.003	1.135	1.040	.746	.605	.511	.434
APRIL	1.276	1.240	1.025	1.002	1.135	1.008	.727	.599	.479	.459
MAY	1.221	1.145	.985	.980	1.135	.988	.704	.574	.412	.599
JUNE	1.174	1.191	.991	.975	1.135	.954	.711	.565	.366	.686
JULY	1.191	1.219	1.008	.998	1.126	.935	.715	.570	.339	.755
AUGUST	1.260	1.161	1.010	1.025	1.097	.945	.715	.580	.378	.767
SEPTEMBER	1.282	1.144	1.011	1.025	1.090	.945	.720	.570	.448	.794
OCTOBER	1.321	1.179	1.025	1.032	1.095	.909	.705	.548	.450	.800
NOVEMBER	1.394	1.212	1.025	1.035	1.100	.885	.688	.540	.442	.810
DECEMBER	1.472	1.225	1.001	1.035	1.100	.845	.664	.540	.430	.820
AVERAGE	1.296	1.268	1.041	1.008	1.113	.970	.721	.578	.444	.646

STRICTLY COMBING 3/8 BLOOD (56S) TERRITORY
(DOLLARS PER POUND SCOURED BASIS)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	1.128	1.361	1.028	.898	.974	1.045	.754	.552	.488	.382
FEBRUARY	1.155	1.355	.986	.895	.993	1.035	.695	.518	.490	.370
MARCH	1.155	1.246	.929	.899	.998	1.006	.668	.510	.461	.383
APRIL	1.129	1.091	.910	.898	1.055	.952	.637	.506	.422	.414
MAY	1.092	.955	.890	.878	1.073	.893	.618	.482	.368	.558
JUNE	.970	.994	.887	.875	1.075	.885	.615	.465	.323	.632
JULY	.998	1.053	.898	.895	1.072	.885	.615	.488	.302	.702
AUGUST	1.091	1.011	.900	.910	1.028	.896	.620	.509	.342	.720
SEPTEMBER	1.130	1.016	.906	.911	1.035	.900	.620	.510	.428	.759
OCTOBER	1.169	1.025	.929	.935	1.040	.888	.604	.484	.425	.775
NOVEMBER	1.222	1.075	.932	.937	1.045	.871	.586	.482	.408	.790
DECEMBER	1.332	1.091	.909	.940	1.045	.821	.581	.485	.390	.815
AVERAGE	1.131	1.106	.925	.906	1.036	.923	.634	.499	.404	.608

TABLE I (CONTINUED)

STRICTLY COMBING 1/4 BLOOD (48S,50S) TERRITORY
(DOLLARS PER POUND SCOURED BASIS)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	.949	1.262	.955	.792	.880	.975	.699	.505	.415	.362
FEBURARY	1.015	1.236	.921	.790	.903	.959	.648	.462	.411	.350
MARCH	.994	1.170	.842	.798	.905	.920	.615	.435	.388	.360
APRIL	.961	.973	.800	.798	.970	.868	.587	.439	.364	.386
MAY	.928	.875	.792	.778	.993	.800	.560	.428	.321	.526
JUNE	.829	.904	.787	.775	1.005	.785	.565	.410	.286	.600
JULY	.835	.970	.798	.795	1.000	.787	.569	.449	.276	.649
AUGUST	.905	.911	.800	.810	.957	.800	.580	.455	.311	.663
SEPTEMBER	.984	.916	.806	.812	.962	.800	.576	.456	.398	.702
OCTOBER	1.021	.962	.828	.836	.965	.788	.565	.428	.400	.710
NOVEMBER	1.091	.996	.830	.845	.975	.780	.556	.412	.383	.720
DECEMBER	1.230	1.002	.805	.855	.975	.741	.547	.415	.370	.730
AVERAGE	.978	1.015	.830	.807	.958	.834	.589	.441	.360	.563

SOURCE: U. S. BUREAU OF AGRICULTURAL ECONOMICS.

APPENDIX

TABLE II

CONSUMPTION OF GREASY COMBING DOMESTIC WOOL

FINE (64S, 70S, 80S)
(1000 POUNDS)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	4,317	5,022	3,606	5,722	6,501	8,985	8,218	7,660	8,464	11,122
FEBRUARY	3,885	4,293	2,992	5,937	7,634	7,548	7,813	9,051	8,809	9,285
MARCH	3,769	3,853	3,166	6,308	6,805	6,770	7,647	9,064	5,642	6,491
APRIL	3,034	2,860	2,704	4,891	4,526	7,787	6,127	11,534	4,446	8,285
MAY	3,019	2,880	2,102	4,855	6,043	6,763	5,515	10,319	2,337	13,475
JUNE	2,726	3,342	2,700	4,212	4,978	7,349	8,397	11,303	3,664	16,072
JULY	3,275	3,990	3,809	4,979	5,410	9,317	9,792	12,733	7,375	14,618
AUGUST	4,644	4,987	3,829	7,245	5,613	11,521	10,046	13,011	12,413	12,967
SEPTEMBER	5,213	4,800	5,268	7,704	6,422	10,223	11,267	13,118	13,576	11,986
OCTOBER	8,355	4,620	5,983	7,716	7,127	12,267	10,018	10,529	11,184	13,561
NOVEMBER	6,192	4,303	6,877	6,255	8,333	9,247	6,463	8,925	11,415	11,478
DECEMBER	6,249	4,497	6,576	5,394	7,937	6,821	8,254	7,580	13,204	7,694
TOTAL	54,678	49,447	49,612	71,218	77,329	104,598	99,557	124,827	102,529	137,034

1/2 BLOOD (58S, 60S)
(1000 POUNDS)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	3,446	4,152	2,017	2,684	3,764	3,864	3,563	2,827	3,097	4,234
FEBRUARY	2,157	2,802	1,600	2,182	3,784	2,192	2,579	2,483	2,798	4,527
MARCH	2,245	2,161	1,903	2,365	2,717	2,672	1,766	2,617	2,350	2,407
APRIL	2,260	1,902	1,573	984	2,575	3,302	2,885	3,157	1,380	2,230
MAY	2,638	1,230	1,449	1,607	2,865	3,043	2,950	3,667	1,162	4,423
JUNE	1,930	1,482	1,760	2,217	2,498	2,783	2,290	4,957	1,670	4,146
JULY	2,651	1,932	1,766	2,260	2,983	3,088	2,531	7,846	3,477	4,814
AUGUST	3,384	2,543	2,475	3,004	3,432	3,499	3,182	5,857	6,057	5,474
SEPTEMBER	3,928	2,946	2,414	3,115	3,405	3,681	2,494	6,099	5,140	3,852
OCTOBER	3,518	3,665	3,255	3,428	4,925	3,863	3,490	4,294	3,357	4,675
NOVEMBER	3,920	3,229	2,521	3,888	3,453	3,125	2,598	3,604	4,535	3,855
DECEMBER	3,780	3,057	2,501	2,808	3,480	2,779	2,483	2,549	3,833	2,678
TOTAL	35,857	31,101	25,234	30,542	39,881	37,891	32,811	49,957	38,856	47,315

TABLE II (CONTINUED)

3/8 BLOOD (56S)
(1000 POUNDS)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	2,300	2,582	1,450	2,483	2,448	3,680	2,004	1,666	1,829	3,061
FEBRUARY	1,747	2,651	1,679	1,673	2,572	2,595	1,256	1,484	1,502	2,269
MARCH	1,708	1,972	1,511	2,555	2,157	2,284	1,218	2,404	1,715	1,880
APRIL	1,662	2,120	1,571	2,137	2,196	1,406	1,130	3,240	1,469	2,036
MAY	1,659	2,002	1,194	1,978	2,031	2,074	1,205	2,950	1,097	3,399
JUNE	962	1,525	2,047	2,405	1,880	2,050	1,387	3,564	1,277	3,436
JULY	1,110	1,384	2,184	2,480	2,200	2,420	2,197	4,698	1,729	3,296
AUGUST	2,449	1,626	2,523	3,225	3,323	2,709	1,767	5,170	2,775	2,990
SEPTEMBER	2,940	1,737	2,420	3,118	3,206	3,105	1,676	3,772	3,862	2,501
OCTOBER	3,531	2,092	2,481	3,103	3,338	3,416	1,726	3,841	3,037	3,782
NOVEMBER	3,245	1,602	2,739	3,163	3,283	2,132	1,866	3,209	2,709	3,638
DECEMBER	3,033	2,492	2,357	2,691	6,675	2,356	1,680	2,950	3,100	3,139
TOTAL	26,346	23,785	24,156	31,011	31,309	30,227	19,112	38,948	26,101	35,427

1/4 BLOOD (48S,50S)
(1000 POUNDS)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	2,744	2,458	1,815	2,101	3,279	2,255	1,493	1,226	2,757	2,317
FEBRUARY	2,441	1,979	1,270	2,239	3,242	1,497	1,713	1,501	2,385	2,027
MARCH	2,129	1,789	1,432	3,010	2,521	1,975	1,544	1,880	2,184	1,962
APRIL	1,764	1,213	1,074	1,845	1,502	2,050	1,361	2,035	1,583	1,419
MAY	1,234	1,243	1,309	2,225	2,051	2,057	1,511	2,816	1,550	2,258
JUNE	1,685	1,624	1,776	2,609	2,253	1,888	1,832	2,750	1,690	3,774
JULY	2,133	2,489	2,490	2,793	3,025	2,715	1,486	2,838	1,938	4,277
AUGUST	3,000	2,526	2,626	3,627	3,618	2,322	1,554	3,021	2,853	2,947
SEPTEMBER	3,693	3,296	2,866	3,929	2,543	2,584	1,798	3,437	4,364	2,166
OCTOBER	3,747	3,045	2,400	4,215	2,970	3,047	1,797	3,541	3,825	2,952
NOVEMBER	3,312	2,604	2,597	2,906	2,370	2,424	1,346	3,085	2,913	3,218
DECEMBER	3,009	2,680	2,039	2,970	1,716	2,023	1,142	2,845	1,774	1,592
TOTAL	30,891	26,946	23,694	34,469	31,123	26,837	18,577	30,975	29,816	30,909

SOURCE: U. S. BUREAU OF CENSUS.

APPENDIX

TABLE III

FIXED BASE RELATIVES OF MONTHLY AVERAGE PRICES OF COMBING WOOLS AT BOSTON

STRICTLY COMBING FINE (64S,70S,80S) FLEECE
(1926 = 100)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	121.8	151.2	109.4	97.4	105.9	99.9	73.2	63.9	52.9	41.3
FEBRUARY	122.3	148.2	106.6	97.4	106.3	98.0	70.7	64.5	51.2	40.9
MARCH	126.8	137.4	103.0	97.4	106.3	94.4	69.6	64.5	47.8	41.6
APRIL	122.3	120.5	100.1	96.1	106.3	90.3	67.7	59.2	44.6	42.8
MAY	120.3	110.3	95.6	93.6	106.9	88.0	66.0	56.2	39.1	56.2
JUNE	114.6	114.9	94.8	93.9	107.2	85.6	66.3	55.1	34.1	64.1
JULY	115.2	120.6	97.2	97.4	105.0	83.5	67.1	56.3	32.7	69.0
AUGUST	121.9	115.2	97.4	97.4	104.5	83.2	67.6	56.5	36.2	70.3
SEPTEMBER	125.9	112.7	98.0	98.0	103.2	82.9	67.6	57.6	43.6	72.6
OCTOBER	131.9	112.8	100.1	100.5	100.3	80.0	66.7	55.0	43.8	73.8
NOVEMBER	139.0	114.7	100.1	101.9	100.1	79.2	65.8	54.3	43.0	74.7
DECEMBER	148.1	114.9	98.0	101.9	100.1	75.3	64.5	54.3	41.5	76.5
AVERAGE	125.8	122.8	100.0	97.8	104.4	86.7	67.7	58.1	42.5	60.3

STRICTLY COMBING 1/2 BLOOD (58S,60S) FLEECE
(1926 = 100)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	125.6	151.6	114.8	96.5	104.2	107.9	79.0	61.4	51.0	41.6
FEBRUARY	126.2	154.9	111.9	96.5	105.9	106.1	75.0	60.4	50.7	39.8
MARCH	129.7	137.5	104.6	96.5	105.9	101.8	72.5	58.3	47.9	40.6
APRIL	125.5	122.3	100.2	95.0	105.9	99.5	69.5	56.8	44.2	42.4
MAY	120.9	112.9	97.0	93.0	105.9	97.1	67.3	54.5	38.2	55.9
JUNE	116.2	115.7	94.4	92.8	106.0	93.6	66.8	51.6	33.6	63.4
JULY	115.9	119.0	94.1	94.9	105.7	92.1	66.8	53.0	31.8	68.9
AUGUST	117.8	113.1	94.1	96.5	106.4	93.6	66.8	53.5	35.8	70.3
SEPTEMBER	123.4	111.4	94.6	96.8	106.4	93.6	66.8	53.3	43.1	73.4
OCTOBER	129.4	115.0	98.4	98.2	106.4	90.4	65.1	51.9	43.1	75.2
NOVEMBER	138.4	118.0	99.0	99.5	107.9	89.1	64.4	51.0	42.7	76.2
DECEMBER	146.8	118.2	97.0	99.5	107.9	83.8	63.4	51.0	41.6	76.7
AVERAGE	126.3	124.2	100.0	96.3	106.2	95.7	68.6	54.8	42.0	60.4

TABLE III (CONTINUED)

STRICTLY COMBING 3/8 BLOOD (56S) FLEECE
(1926 = 100)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	126.1	158.9	117.2	96.3	108.8	119.6	86.5	58.8	50.8	42.7
FEBRUARY	129.5	159.3	110.6	96.3	112.1	119.3	78.3	54.8	50.4	42.0
MARCH	132.4	144.8	104.1	96.3	112.6	115.6	74.9	51.6	46.6	41.9
APRIL	130.0	126.4	99.4	94.5	116.8	109.1	71.5	50.9	42.9	43.9
MAY	125.4	108.7	95.7	91.0	118.9	99.4	65.1	49.0	37.1	62.5
JUNE	113.2	109.5	93.0	90.7	123.1	98.0	64.8	47.6	33.1	71.1
JULY	110.7	116.9	95.1	92.4	120.2	98.5	64.8	49.1	31.5	75.8
AUGUST	119.7	113.2	95.1	95.1	117.9	99.2	65.6	50.9	35.9	78.4
SEPTEMBER	126.0	113.3	95.1	95.8	118.3	100.5	65.9	51.9	48.1	84.1
OCTOBER	131.3	115.5	98.1	101.3	118.4	100.7	64.9	50.8	47.6	88.7
NOVEMBER	141.4	117.9	99.2	103.3	119.6	99.1	63.1	50.8	44.6	89.8
DECEMBER	153.3	119.6	96.8	103.3	119.6	93.1	62.0	50.8	43.2	92.5
AVERAGE	128.2	125.3	100.0	96.4	117.2	104.3	69.0	51.5	42.7	67.8

STRICTLY COMBING 1/4 BLOOD (48S,50S) FLEECE
(1926 = 100)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	117.6	161.1	119.6	95.3	109.7	120.8	87.0	59.1	47.3	43.4
FEBRUARY	122.1	157.4	115.0	95.3	113.8	119.2	79.3	54.3	47.1	42.2
MARCH	122.1	147.2	106.1	95.3	114.5	115.1	74.8	50.6	44.5	41.9
APRIL	119.2	122.1	99.7	93.4	117.6	107.2	70.2	49.4	40.2	43.7
MAY	114.3	119.9	93.9	91.3	121.1	98.6	66.0	47.2	35.5	64.3
JUNE	101.0	113.3	91.3	90.4	122.1	96.5	67.1	46.0	31.7	72.6
JULY	100.6	118.3	94.0	95.4	121.7	97.1	67.1	47.4	31.2	77.2
AUGUST	105.5	112.7	94.5	95.9	120.2	97.8	67.1	49.4	35.2	79.7
SEPTEMBER	119.6	111.4	94.6	97.2	120.7	97.8	67.1	49.6	48.8	85.9
OCTOBER	130.8	117.0	97.1	101.5	120.8	96.3	66.4	48.0	48.1	88.9
NOVEMBER	139.1	120.7	97.8	103.2	120.8	95.4	64.1	47.3	45.5	89.5
DECEMBER	156.6	123.4	95.8	104.2	120.8	92.7	62.5	47.3	44.1	90.2
AVERAGE	120.7	126.3	100.0	96.5	118.7	102.9	69.9	49.6	41.6	68.3

APPENDIX

TABLE III (CONTINUED)

STRICTLY COMBING FINE (64S,70S,80S) TERRITORY
(1926 = 100)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	119.4	144.1	109.5	94.2	99.8	97.7	70.7	58.9	49.7	37.9
FEBRUARY	119.6	141.5	106.5	94.2	100.3	95.1	68.0	57.2	48.2	37.9
MARCH	122.6	131.8	101.5	94.9	100.3	92.8	67.3	57.2	46.3	39.2
APRIL	118.5	118.7	99.5	94.0	100.9	89.9	65.3	56.5	42.3	41.7
MAY	116.4	108.9	96.2	92.5	102.7	86.2	64.7	54.6	37.5	53.7
JUNE	110.8	111.5	95.0	92.5	103.7	83.8	65.4	52.9	33.0	60.2
JULY	111.4	117.8	99.8	95.2	103.1	81.1	65.4	53.3	31.4	66.6
AUGUST	117.9	113.7	99.8	95.5	99.2	80.9	65.4	54.6	34.9	68.1
SEPTEMBER	121.8	111.0	99.8	95.9	96.8	80.1	65.6	53.4	41.1	70.4
OCTOBER	126.6	110.2	99.8	96.8	96.8	77.4	64.5	51.1	41.7	71.4
NOVEMBER	132.6	113.1	97.8	96.8	97.4	75.7	62.9	50.8	40.2	72.3
DECEMBER	140.8	113.1	94.4	96.8	97.7	72.7	62.0	50.8	38.7	73.1
AVERAGE	121.5	119.6	100.0	94.9	99.9	84.4	65.6	54.3	40.4	57.7

FRENCH COMBING FINE (64S,70S,80S) TERRITORY
(1926 = 100)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	119.1	143.9	112.7	95.9	101.2	101.5	72.3	59.4	50.0	38.4
FEBRUARY	122.9	141.4	109.5	95.9	102.2	98.2	70.3	57.5	49.1	37.9
MARCH	123.9	129.7	102.9	95.9	102.7	96.4	69.2	57.5	47.0	40.0
APRIL	118.2	121.7	101.0	95.9	103.4	94.0	68.0	56.7	43.2	42.9
MAY	116.9	113.7	96.2	94.0	104.7	90.0	66.9	54.8	38.0	56.4
JUNE	110.6	115.2	94.9	94.0	105.2	88.1	66.9	52.9	33.7	63.6
JULY	111.4	119.9	95.9	95.4	104.7	86.1	66.9	53.4	31.7	70.3
AUGUST	119.7	117.5	95.9	95.9	102.1	86.1	67.4	54.3	35.3	71.3
SEPTEMBER	123.1	118.0	96.4	97.5	99.6	84.8	67.4	52.7	41.2	73.7
OCTOBER	128.3	117.7	99.6	99.0	99.6	80.5	65.7	50.5	41.2	74.8
NOVEMBER	135.1	117.7	99.0	99.6	101.0	78.6	64.2	50.0	40.0	75.8
DECEMBER	142.2	115.8	95.5	99.6	101.5	76.2	62.3	50.0	38.5	76.7
AVERAGE	122.6	122.6	100.0	96.5	102.3	88.4	67.3	54.2	40.8	60.2

APPENDIX

TABLE III (CONTINUED)

STRICTLY COMBING 1/2 BLOOD (58S,60S) TERRITORY
(1926 - 100)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	124.0	150.0	114.3	95.6	103.6	105.7	76.8	60.9	51.9	40.8
FEBRUARY	128.0	150.0	111.6	95.6	108.1	103.8	73.0	58.6	51.4	39.6
MARCH	128.0	132.4	102.0	96.4	109.0	99.9	71.7	58.1	49.1	41.7
APRIL	122.6	119.1	98.5	96.3	109.0	96.8	69.8	57.5	46.0	44.1
MAY	117.3	110.0	94.6	94.1	109.0	94.9	67.6	55.1	39.6	57.5
JUNE	112.8	114.4	95.2	93.7	109.0	91.6	68.2	54.3	35.2	65.9
JULY	114.4	117.1	96.8	95.9	108.2	89.8	68.7	54.8	32.6	72.5
AUGUST	121.0	111.5	97.0	98.5	105.4	90.8	68.7	55.7	36.3	73.7
SEPTEMBER	123.2	109.9	97.0	98.5	104.7	90.8	69.2	54.8	43.0	76.3
OCTOBER	126.9	113.3	98.5	99.1	105.2	87.3	67.7	52.6	43.2	76.8
NOVEMBER	133.9	116.5	98.5	99.4	105.7	85.0	66.1	51.9	42.5	77.8
DECEMBER	141.4	117.6	96.2	99.4	105.7	81.2	63.8	51.9	41.3	78.8
AVERAGE	124.5	121.8	100.0	96.8	106.9	93.2	69.3	55.5	42.7	62.1

STRICTLY COMBING 3/8 BLOOD (56S) TERRITORY
(1926 = 100)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	121.9	147.1	111.1	97.1	105.3	113.0	81.5	59.7	52.7	41.3
FEBRUARY	124.9	146.5	106.6	96.8	107.4	111.9	75.1	56.0	53.0	40.0
MARCH	124.9	134.7	100.4	97.2	107.9	108.8	72.2	55.1	49.8	41.4
APRIL	122.1	117.9	98.4	97.1	114.1	102.9	68.9	54.7	45.6	44.8
MAY	118.1	103.2	96.2	94.9	116.0	96.5	66.8	52.1	39.8	60.3
JUNE	104.9	107.5	95.9	94.3	116.2	95.7	66.5	50.3	34.9	68.3
JULY	107.9	113.8	97.1	96.8	115.9	95.7	66.5	52.8	32.6	75.9
AUGUST	117.9	109.3	97.3	98.4	111.1	96.9	67.0	55.1	37.0	77.8
SEPTEMBER	122.2	109.8	97.9	98.5	111.9	97.3	67.0	55.1	46.3	82.1
OCTOBER	126.4	110.8	100.4	101.1	112.4	96.0	65.3	52.3	45.9	83.8
NOVEMBER	132.1	116.2	100.8	101.3	113.0	94.2	63.4	52.1	44.1	85.4
DECEMBER	144.0	117.9	98.3	101.6	113.0	88.8	62.8	52.4	42.2	88.1
AVERAGE	122.3	119.6	100.0	97.9	112.0	99.8	68.5	53.9	43.7	65.7

TABLE III (CONTINUED)

STRICTLY COMBING 1/4 BLOOD (48S,50S) TERRITORY
(1926 = 100)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	114.3	152.0	115.1	95.4	106.0	117.5	84.2	60.1	50.0	43.6
FEBRUARY	122.3	148.9	111.0	95.2	108.8	115.5	78.1	55.7	49.5	42.2
MARCH	119.8	141.0	101.4	96.1	109.0	110.8	74.1	52.4	46.8	43.4
APRIL	115.8	117.2	96.4	96.1	116.9	104.6	70.7	52.9	43.9	46.5
MAY	111.8	105.4	95.4	93.7	119.6	96.4	67.5	51.6	38.7	63.4
JUNE	99.9	108.9	94.8	93.4	121.0	94.6	68.1	49.4	34.5	72.3
JULY	100.6	116.9	96.1	95.8	120.5	94.8	68.6	54.1	33.3	78.2
AUGUST	109.0	109.8	96.4	97.6	115.3	96.4	69.9	54.8	37.5	79.9
SEPTEMBER	118.6	110.4	97.1	97.8	115.9	96.4	69.4	54.9	48.0	84.6
OCTOBER	123.0	115.9	99.8	100.7	116.3	94.9	68.1	51.6	48.2	85.5
NOVEMBER	131.4	120.0	100.0	101.8	117.5	94.0	67.0	49.6	46.1	86.7
DECEMBER	148.2	120.7	97.0	103.0	117.5	89.3	65.9	50.0	44.6	88.0
AVERAGE	117.8	122.3	100.0	97.2	115.4	100.5	71.0	53.1	43.4	67.8

SOURCE: COMPUTED FROM DATA IN TABLE I USING THE 1926 ANNUAL AVERAGE IN EACH PRICE SERIES AS A BASE.

APPENDIX

TABLE IV

CYCLICAL INDEX OF CONSUMPTION OF GREASY COMBING DOMESTIC WOOL ADJUSTED FOR SEASONAL AND SECULAR TRENDS

DEVIATIONS FROM COMPUTED NORMAL

FINE (64S, 70S, 80S)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	+30	+23	−23	+ 4	+ 4	+28	+ 6	− 9	− 8	+11
FEBRUARY	+16	+ 6	−36	+ 7	+21	+ 8	+ 1	+ 7	− 4	− 6
MARCH	+19	+ 2	−25	+21	+16	+ 4	+ 7	+14	−29	−25
APRIL	+ 6	−13	−26	+ 4	−10	+26	− 4	+50	−32	+ 1
MAY	+10	− 7	−32	+ 9	+17	+18	− 6	+42	−48	+55
JUNE	− 6	− 5	−28	− 9	− 6	+18	+21	+45	−42	+72
JULY	−13	−12	−28	−18	−20	+23	+17	+39	−25	+37
AUGUST	0	−13	−49	− 3	−39	+29	− 2	+21	+ 4	0
SEPTEMBER	+ 5	−25	−31	− 4	−36	+ 4	+ 5	+14	+ 8	−17
OCTOBER	+81	−30	−19	− 5	−26	+29	−11	−15	−17	− 3
NOVEMBER	+41	−22	+12	−13	+ 6	+ 6	−37	−17	+ 1	− 7
DECEMBER	+42	−17	+ 7	−25	+ 1	−24	−15	−29	+19	−39

1/2 BLOOD (58S, 60S)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	+34	+55	−33	−13	+19	+17	+ 2	−24	−20	+ 9
FEBRUARY	+ 5	+26	−24	− 6	+45	−13	− 4	−10	− 3	+42
MARCH	+16	+ 7	− 6	+ 7	+15	+10	−22	+ 1	−10	−10
APRIL	+19	0	−16	−39	+13	+33	+15	+20	−35	−12
MAY	+31	−29	−24	−21	+19	+21	+14	+32	−44	+45
JUNE	− 2	−23	−15	− 2	+ 4	+ 9	−10	+66	−33	+34
JULY	+ 1	−32	−41	−27	− 7	− 7	−28	+125	− 7	+26
AUGUST	+12	−27	−34	−20	−10	−13	−27	+48	+47	+25
SEPTEMBER	+35	−11	−35	−15	−10	− 6	−47	+55	+22	−18
OCTOBER	+10	+ 9	−12	−12	+32	− 8	−24	− 5	−36	− 3
NOVEMBER	+41	+ 7	−24	+19	− 2	−17	−36	−10	+12	−11
DEOEMBER	+49	+14	−11	− 5	+13	−14	−26	−27	+ 6	−29

APPENDIX

TABLE IV (CONTINUED)

3/8 BLOOD (56S)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	+11	+21	−32	+12	+ 8	+58	−15	−30	−25	+22
FEBRUARY	0	+40	− 6	− 8	+29	+28	−30	−22	−22	+ 7
MARCH	− 4	+ 7	−16	−29	+ 9	+13	−33	+14	−16	−10
APRIL	− 3	+17	−10	+13	+14	−22	−34	+51	−22	− 1
MAY	+ 1	+15	−23	+10	+10	+11	−27	+43	−33	+56
JUNE	−37	−12	+10	+24	− 1	+ 4	−25	+62	−31	+52
JULY	−45	−34	+ 1	+12	− 3	+ 5	− 6	+93	−28	+31
AUGUST	− 8	−48	− 9	+19	+20	− 8	−49	+87	−12	− 6
SEPTEMBER	+13	−45	−16	+12	+13	+ 6	−55	+28	+29	−27
OCTOBER	+37	−32	−17	+ 8	+16	+16	−56	+28	− 7	+19
NOVEMBER	+36	−42	+ 7	+23	+25	−26	−39	+14	− 8	+26
DECEMBER	+30	+ 2	− 6	+ 6	+ 3	−13	−42	+ 7	+11	+10

1/4 BLOOD (48S,50S) (1)

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	+22	+10	−18	− 5	+45	+ 1	−31	−43	+23	+ 4
FEBRUARY	+17	− 3	−33	+ 8	+51	−23	−14	−23	+15	− 1
MARCH	+ 4	−11	−26	+41	+20	− 3	−21	− 7	+ 6	− 3
APRIL	+ 7	−16	−22	+11	− 4	+19	−10	+19	− 1	− 8
MAY	−23	−23	−20	+19	+11	+12	−12	+44	−10	+20
JUNE	−14	−17	−10	+25	+10	− 6	− 8	+31	−14	+75
JULY	−13	+ 2	+ 2	+15	+25	+12	−41	+17	−21	+78
AUGUST	+ 9	−11	− 7	+36	+35	−20	−53	+10	+ 3	+ 7
SEPTEMBER	+22	+ 5	−13	+32	−27	−25	−58	+12	+51	−43
OCTOBER	+25	− 5	−33	+45	− 8	− 5	−58	+16	+28	− 9
NOVEMBER	+29	− 1	− 1	+12	−11	− 9	−55	+20	+12	+25
DECEMBER	+32	−18	− 9	+31	−23	−10	−47	+25	−20	−28

SOURCE: COMPILED FROM DATA IN TABLE II BY THE RELATIVE METHOD OF COMPUTING THE CYCLICAL TREND.

(1) ADJUSTED FOR SEASONAL ONLY. MEAN MONTHLY CONSUMPTION FOR PERIOD CORRECTED BY SEASONAL TREND USED AS BASIS FOR CYCLICAL INDEX AS NO CONCLUSIVE SECULAR TREND WAS INDICATED BY DATA.

APPENDIX

TABLE V

CYCLICAL INDEX OF PRICES OF FRENCH COMBING FINE (64S,70S,80S) TERRITORY WOOL AT BOSTON

ADJUSTED FOR SEASONAL AND SECULAR TRENDS

DEVIATIONS FROM COMPUTED NORMAL

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	0	+29	+ 5	− 7	+ 4	+11	−17	−29	−36	−49
FEBRUARY	+ 5	+28	+ 3	− 6	+ 7	+ 9	−19	−30	−36	−48
MARCH	+ 9	+20	0	− 2	+11	+11	−16	−26	−36	−41
APRIL	+ 7	+16	+ 1	+ 1	+15	+11	−15	−24	−38	−33
MAY	+10	+12	0	+ 3	+21	+10	−12	−23	−42	− 9
JUNE	+ 6	+16	+ 1	+ 5	+24	+10	−10	−23	−46	+ 5
JULY	+ 7	+21	+ 2	+ 7	+24	+ 8	−10	−22	−49	+17
AUGUST	+15	+18	+ 2	+ 7	+20	+ 8	−10	−22	−44	+18
SEPTEMBER	+17	+18	+ 2	+ 8	+17	+ 6	−10	−24	−36	+22
OCTOBER	+22	+18	+ 5	+10	+18	+ 1	−12	−27	−36	+25
NOVEMBER	+28	+18	+ 4	+11	+19	− 2	−14	−28	−38	+26
DECEMBER	+37	+17	+ 2	+12	+21	− 3	−15	−27	−39	+30

CYCLICAL INDEX OF PRICES OF STRICTLY COMBING 3/8 BLOOD (56S) TERRITORY WOOL AT BOSTON

ADJUSTED FOR SEASONAL AND SECULAR TRENDS

DEVIATIONS FROM COMPUTED NORMAL

MONTH	1924	1925	1926	1927	1928	1929	1930	1931	1932	1933
JANUARY	0	+29	0	+ 9	+ 5	+20	−11	−33	−37	−49
FEBRUARY	+ 5	+31	− 2	+ 7	+10	+21	−16	−35	−34	−48
MARCH	+ 9	+23	− 5	− 3	+14	+21	−16	−33	−35	−43
APRIL	+11	+12	− 2	+ 1	+25	+19	−16	−29	−37	−34
MAY	+11	+ 2	0	+ 3	+32	+16	−14	−28	−41	− 6
JUNE	+ 2	+ 8	+ 2	+ 5	+34	+18	−12	−28	−45	+ 8
JULY	+ 4	+14	+ 2	+ 7	+34	+17	−12	−25	−49	+20
AUGUST	+12	+ 9	+ 2	+ 8	+28	+18	−12	−23	−44	+22
SEPTEMBER	+15	+ 8	+ 1	+ 7	+27	+17	−14	−25	−32	+27
OCTOBER	+18	+ 8	+ 3	+ 9	+27	+15	−17	−29	−33	+30
NOVEMBER	+23	+13	+ 3	+ 9	+27	+12	−20	−30	−36	+32
DECEMBER	+34	+15	+ 1	+ 9	+28	+ 6	−20	−29	−39	+37

SOURCE: COMPILED FROM DATA IN TABLE I BY RELATIVE METHOD OF COMPUTING CYCLICAL TREND.

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Burrus

Effect of wool consumption upon behavior of domestic prices

DATE	ISSUED TO
2:35	Thomas J McMakin

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